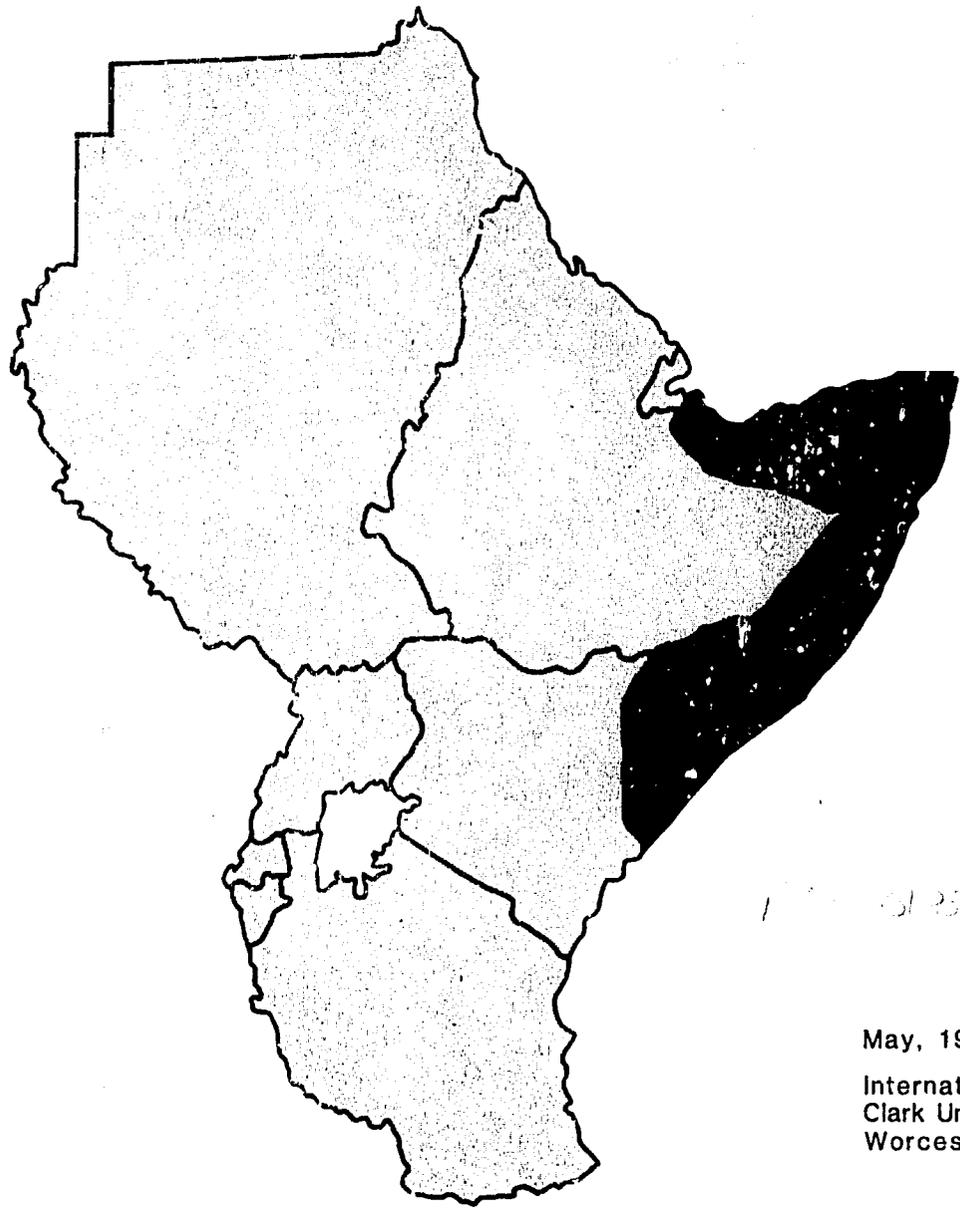


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SOMALIA



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EASTERN AFRICA COUNTRY PROFILES

COUNTRY PROFILE #4

THE REPUBLIC OF SOMALIA

REVISED EDITION

by

L. Berry

I. Johnston

June, 1983

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PREFACE

This country profile of Somalia is a revised edition prepared as one in a series of Eastern African country profiles prepared for East African mission directors. The profiles serve as overview statements of the basic characteristics of the countries, their major development problems, and a discussion of the distribution of poverty. Other country profiles in the series have been prepared for Sudan, Tanzania, Kenya, Djibouti, Ethiopia, and Uganda. The first study of Somalia in 1980 involved a review of current literature and the scant data base available and a short field visit to Somalia.

This updated profile is an introduction to development issues in Somalia for USAID personnel. It provides three approaches to examining the country: (1) a general overview of the country, people, economy and culture; (2) a summary analysis of current development issues, and (3) a survey of the distribution of poverty.

Each of these topics merits more detailed study. For those wishing to pursue a subject further, a list of readings is can be found at the back of the profile. In the United States, Clark University's International Development Program will help locate additional materials and related documents; in Somalia, the Somalia Institute for Development Administration and Management (SIDAM) and the University are probably the best sources for documentation and literature.

I. Johnston, S. Steward and K. Sabasteanski of Clark University worked with L. Berry on this version. J. Callahan of the Clark University Cartography Laboratory designed the cover and worked with P. Schmitthenner on the maps and charts; the staff of Word Processing of Worcester typed the paper.

Any criticisms or suggestions either on the general approach or this manuscript in particular are gratefully appreciated.

CHAPTER I. INTRODUCTION

The Somali Democratic Republic, situated on the Horn of Africa between latitudes 1.5° south and 12° north, shares a boundary with Ethiopia, Kenya and Djibouti (Figure 1). It is estimated that 3.8 million people live in the country's 638,000 square kilometers (Overseas Development Council 1982). Reliable estimates of the total population are difficult to obtain because of the constant mobility of many people both within and outside the national frontiers. (See Appendix I for statistics on the demography, economy, and domestic production of Somalia.)

The vast majority of Somalia's population (55-60%) are nomads who rely on herding and stock raising for a living. Between 15 and 20 percent are sedentary farmers or fishermen and the rest work in services or industry. Agriculture is the most important sector in the nation's economy and is centered on livestock production, rainfed agriculture and irrigated agriculture. Somalia's physical resource base is very poor, and its per capita Gross National Product of \$140 in 1979 makes it one of the world's poorest countries (Overseas Development Council 1982).

Somalia is an ambitious country attempting to develop along a path of scientific socialism which is explained in Section 2.3. The country's strategic location along access routes to the Suez Canal and Indian Ocean makes the possibility of Soviet or Western interests in the country high. Diplomatic relations with the Soviet Union, following President Barre's takeover in 1967, broke down in 1977 during the Ogaden War. Today, the country increasingly welcomes Western assistance in development planning. Somalia's long term goal of self-reliance in agriculture, however, has been faced with series of problems, particularly in the past decade.

The implementation of the 1974-78 development plan was thrown off balance due to the Sahelian drought. Sky rocketing oil prices in the mid 1970s meant greater economic problems, particularly for the balance of payments situation. Finally, the Ogaden War resulted in a channeling of scarce development funds into the war effort--25 percent of government expenditure went to defense in 1979. The government also had to deal with a massive refugee crisis (World

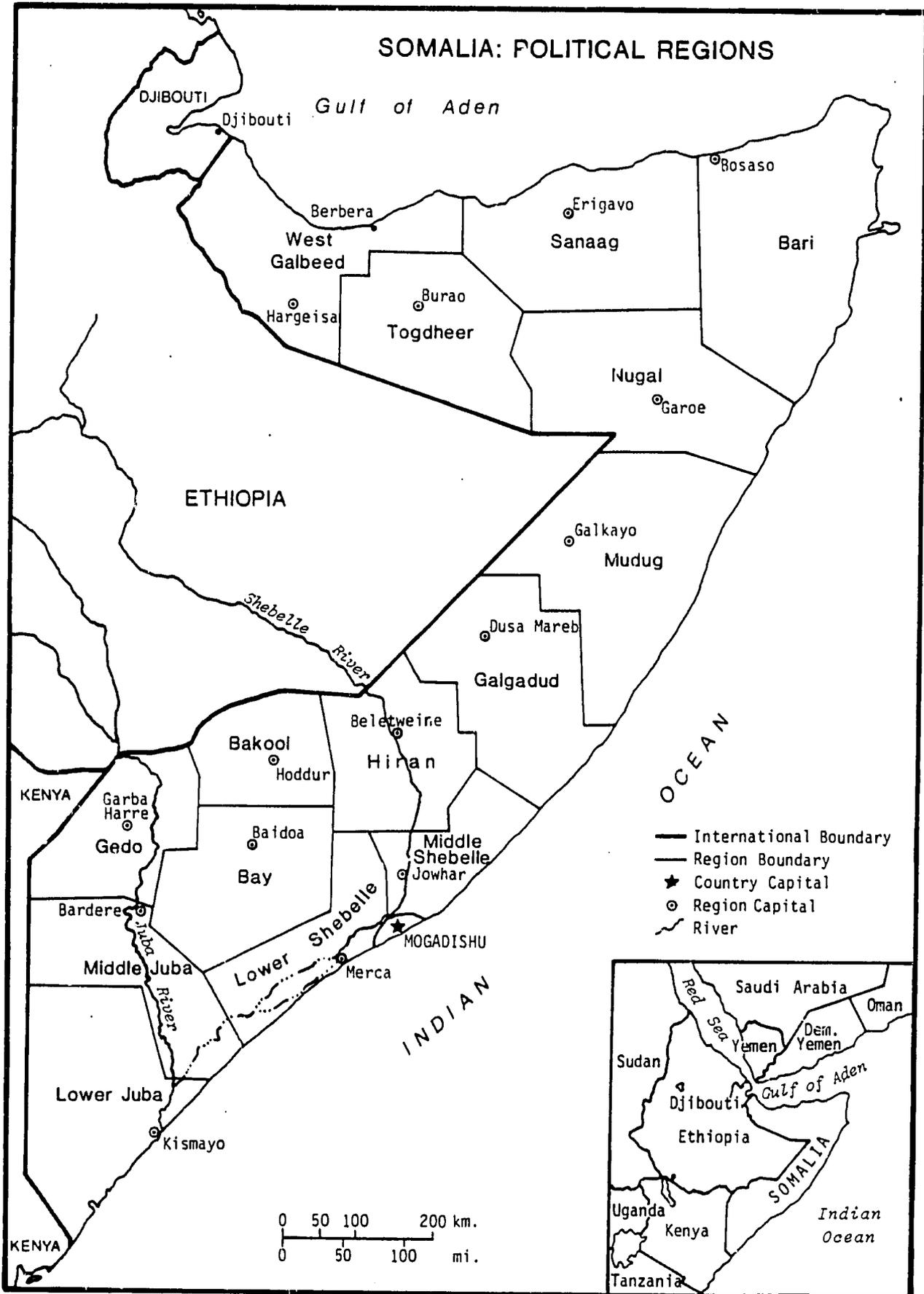
Bank 1982). The cost of supporting about 1 million destitute people remains a burden on the nation's economy.

Key efforts undertaken by the Government in recent years include literacy programs, resettlement and sedentarization of drought and war refugees, well drilling, health facility construction, fishery projects and of increasing importance, irrigation projects. The expansion of irrigation offers a potential for Somalia to feed itself either directly or indirectly through producing domestic food crops and export crops.

Hopeful as long term prospects for Somalia may be, there are major difficulties to overcome. Can production of rainfed crops be increased and made more reliable? Can the majority of the expanding population (annual growth is 3.1 percent) continue to depend on livestock production? How can the pressures of increasing livestock size on resources be addressed? Can irrigation both improve food self reliance and provide for exports? What are the impacts of the refugee problem on agricultural and development planning over the next years? These are few of the development questions in Somalia that are addressed in the following pages.

In Chapter 2, this profile offers a general background to Somalia for those not familiar with the country. In Chapter 3, we have selected thirteen key development issues and provide a short commentary on them. Neither the selection of issues nor the commentary is definitive. Some of the issues are not currently of direct concern to USAID programs but we felt it important to provide a broad overview. Finally, Chapter 4 summarizes the nature and distribution of poverty in Somalia briefly, analyzing trends in urbanization and out-migration.

FIGURE 1



SOURCE: World Bank 1981c, 239

CHAPTER 2. BACKGROUND TO SOMALIA

2.1 HISTORY

Somalia is the most ethnically homogeneous African nation. Between 90 and 95 percent of the people are ethnic Somalis. Ancestors of the present population seem to have migrated from the north, bringing livestock and pastoral practices with them. It is not known precisely when these migrations began, but limited archaeological finds along the coast, including Greek and Roman coins dating back two millennia, imply some form of early habitation and trade.

More solid evidence dates from about a thousand years ago. Arab merchants from across the Gulf of Aden established trading colonies along the north coast at Zeila and along the east coast, especially at Mogadishu. These settlements established contact with local pastoralists and soon prospered. They opened trading partnerships between Somalis and the Arab world to the north which increased the probability that Somalis would be linked in religion and politics to their Moslem neighbors, and sympathetic to the attacks on Christian Ethiopians who lived on the highlands and mountains inland.

Trade links with the Arabian Peninsula continue to the present, with Somali exports of semi-skilled labor, meat, and hides creating a good source of income. Islam is still a major force in Somalia, cementing close ties with the Arab world.

Periodic conflict with Ethiopia is perhaps the most significant result of Muslim influence in Somalia. There were no major Somali penetrations into the Ethiopian interior until the 16th century, when Ahmad Guray captured much of central Ethiopia--an event which is remembered today as a great national triumph for Somalis. The struggle has continued intermittently for almost 1000 years.

Somalia's strategic location made foreign intervention inevitable: by the 1800's, Britain, France, Russia, and Italy were involved in the Horn of Africa. The British sought stability in the region to safeguard their Suez Canal interests and to protect the headwaters of the Nile River. Because they considered the land bordering the southern coast of the Gulf of Aden vital to

their national security, the British signed treaties of friendship and protection with northern Somali leaders. The territory eventually became known as British Somaliland.

At the same time, Britain encouraged its ally, Italy, to do the same along Somalia's eastern coast. The eastern region became known as Italian Somalia, while Britain further promoted the Italians in their new colony of Eritrea in the northwest.

France and Russia, on the other hand, wished to discredit and weaken British power in the Horn. To do this, they provided Ethiopia's Emperor Menelik with arms to strengthen Ethiopian authority in the area. In a series of battles launched with his newly received European weapons, Menelik devastated the Italian army at Adowa in 1896. Ethiopia then took over the Ogaden.

Menelik thereby seized control of a large part of the territory previously ruled and still occupied by Somalis. The victory slowed Italian interest in the region, allowed the French to stay on in what is now Djibouti, and limited British involvement to the dry and hostile environment of the northern coast.

By the turn of the century, Somalia was divided by colonial conquest into five separate areas:

1. French Somaliland (Djibouti) where the French constructed a railway line to link Addis Ababa with the sea;
2. British Somaliland (now part of Somalia) which included the northern coast along the Gulf of Aden;
3. Italian Somalia (now part of Somalia) which the Italians used as a staging area to "reconquer" Ethiopia and which became an area of Italian settlement, especially for fruit plantations;
4. The Ogaden (now part of Ethiopia) which Menelik secured as Ethiopian territory in the 1890's and which Somalia continues to claim;
5. Northern Kenya (then part of British Kenya and now part of Republic of Kenya), sparsely populated zone in northeast Kenya where many of the people are ethnic Somalis (See Figure 1).

These five pieces became the five points of the Somalia star, a symbol of Somali nationalism. Somali attempts to reunite the five areas were quick and

energetic. In the 1910's, Sayid Mohamed Abdille Hassan led a holy war to drive the Ethiopians out of the Ogaden, an attempt which collapsed with his death in 1920.

New hope appeared in 1941 when France and Britain liberated Ethiopia from Italian rule. All of the Somali homelands, except Djibouti, came under British control. Yet optimism was short lived, as in 1950 the British and Italian protectorates were reestablished. Ethiopia also regained the Ogaden as well as control of the former Italian colony of Eritrea.

Somali nationalism intensified, partially because nationalism was burgeoning all over Africa, but also because Somalis saw themselves as victims of especially cruel colonial injustice. When independence arrived in 1960, it united only two of the five points of the star--British and Italian Somalia. The other three remained in "alien" hands. Tension continues today in the border war with Ethiopia.

Much of the region's history of the last two decades can be understood as a struggle by Somalis to regain their lost territory and people and to correct the "injustices" of the colonial period. Since these corrections conflict with the OAU's agreement to accept the colonial borders as permanent, Somalia is now in an ambiguous position in the eyes of other African nations. Clearly, Somalia's border conflicts must be resolved if its many development efforts are to succeed.

2.2 CULTURAL BACKGROUND

Somalia is a pastoral society: about 60 percent of the people are nomads, while most of the rest keep at least some cattle, camels, sheep, or goats. Livestock herding is the dominant and most prestigious lifestyle. Wealth, status, and political influence begin and end with the size and quality of one's herds and flocks.

Traditionally the nomadic communities traveled in groups of twenty to thirty nuclear families with their livestock. Each community would establish a degmo (grazing encampment) which would house the cluster of tents and live-

stock for two to three weeks. Then the degmo would move on to a second site where water and grass were available. The clan and family groupings had well-established, traditionally accepted spheres of influence depending on the season. Migration patterns also followed regular seasonal routes.

Risk-taking, mobility, limited personal wealth and a highly aggressive lifestyle are some of the traits which pastoralism has established among the Somali herdsman. Somali men were accustomed to living with the vagaries of a harsh environment and therefore were prepared to take unusual risks in the prospect of increasing their herd size. Long treks, physical hardships, and inter-clan frictions (especially during the dry season) were common. Skills of leadership and creative decision making were highly prized. In particular, disputes over rangeland, water or grass were settled by the senior males while most clans were governed by a council of elders.

Nomadism and the values of a pastoral lifestyle, though still of high social priority have declined in economic significance during the past two decades and there is as yet no well defined economic system to take their place. More people are now involved in an agrarian and settled lifestyle which was formerly considered a lower risk and therefore lower status way of life. Two main factors have led to this change in traditional lifestyles.

The availability of cement tanks and other permanent watering points have undercut the need for mobility and migration. Although livestock wealth is still the most valued social attribute, such wealth can now be managed in moist years without a nomadic lifestyle. A decline in migration has, however, increased the concentration of cattle around the watering points, thereby increasing the vulnerability of stock owners in dry years.

Secondly, political unrest has also disrupted traditional life styles especially in the last decade. Hundreds of thousands of refugees have migrated to Somalia resulting in the largest refugee problem in Africa and perhaps in the world (see Section 3). Established as short term, temporary quarters to handle an emergency situation, the refugee camps have become, to some extent, a permanent home for women and children while men tend to their herds or "practice politics".

For whatever reasons, family life and livelihood systems in Somalia have been drastically reorganised. The final results are not yet clear but live-stock units are still a major investment and source of power. Nomadism may be Somalia's principle social and political system, but it no longer utilises the full breadth of potential range or manpower resources.

2.3 THE POLITICAL SETTING

Clan membership is probably the most significant variable in Somali politics. Agriculturalists are almost without political influence. Of the pastoralist clans, the Darod (Figure 2) have been by far the most politically active. The following table cites clan membership of cabinet ministers or members of the Supreme Revolutionary Council since 1960:

TABLE 1
CLAN REPRESENTATION

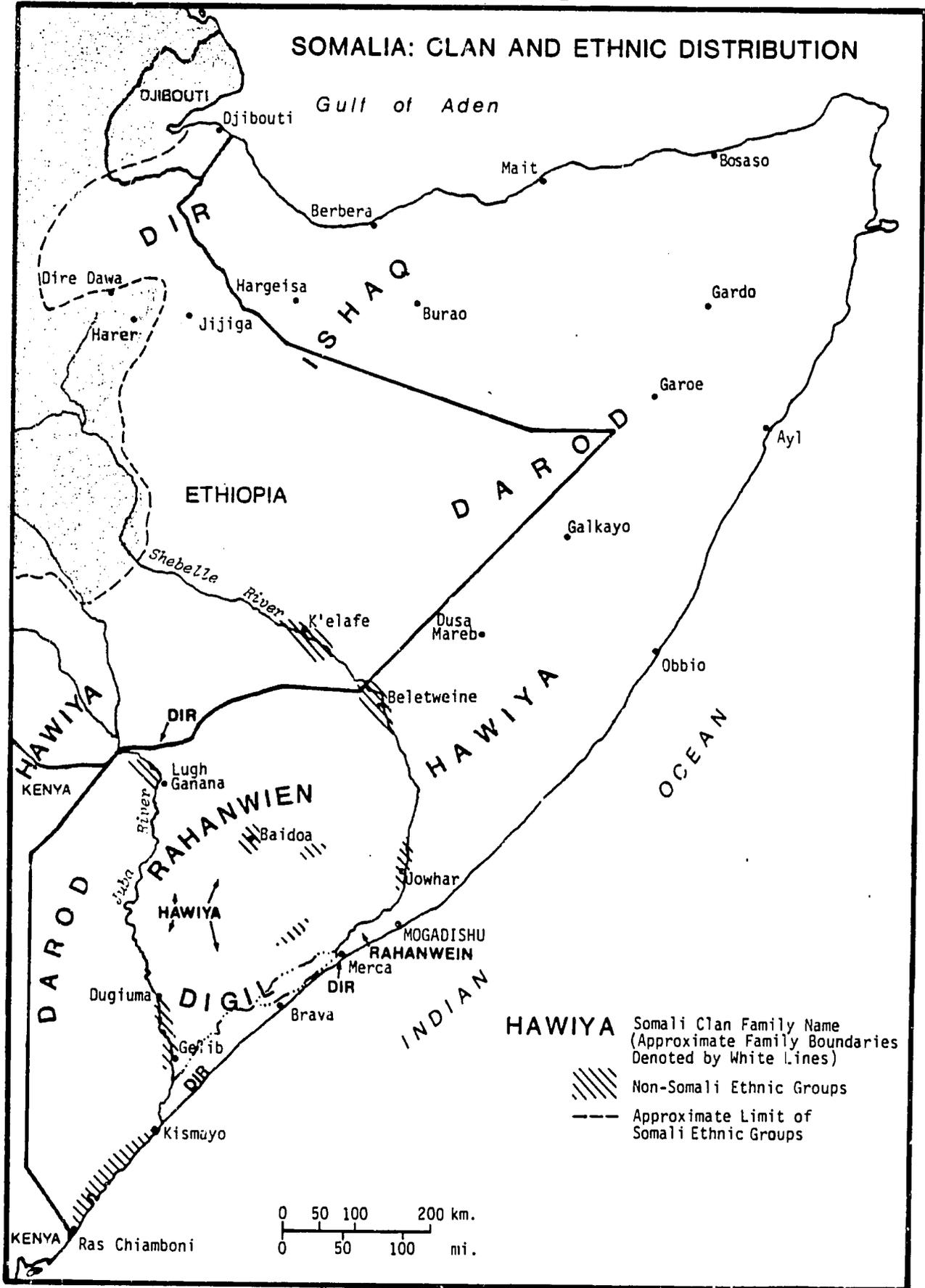
<u>Clan</u>	<u>Number of Key Government Leaders</u>
Darod)	34
Hawive) pastoralists	20
Ishaq)	18
Dir)	4

Digil &) agriculturalists Rahanwin)	10

SOURCE: Berry; Taurus; Ford 1980, 15.

The drive for reunification of all Somalis is a major political factor. During the three years in which Somalia's independence (1960) preceded Kenya's (1963), newly independent Somalia negotiated vigorously with Kenya's British

FIGURE 2



SOURCE: Central Intelligence Agency 1977

colonizers to secure pieces of northern Kenya--where ethnic Somalis lived--for Somalia. When negotiations failed, Somalia fought in border skirmishes with Kenya from 1963 to 1967.

In 1963, similar frictions surfaced in the Ogaden. Western backing for both Ethiopia and Kenya during these "tensions" was countered by the provision of small amounts of Soviet defensive weapons to Somalia. A Somali civilian government, beginning in 1967, tried to quell nationalistic ambitions. The new government also took measures to curb corruption and inefficiency as well as to initiate development projects, but failed on all counts and was overthrown in October of 1969 by a military coup.

The new leader, General Mohamed Siyad Barre, quickly set about an energetic campaign of domestic reform. Within a year, President Barre's policy of Scientific Socialism included major campaigns to improve literacy and health standards; regulate prices; increase state management of grain, banana, and sugar production; deemphasize traditional clan loyalties; and strengthen Soviet influence in Somalia.

Somalia's development policy since 1970 has been based on a socialist framework. Three main concepts stand out in this framework: the end of neo-colonial subservience, the end of national poverty, and an improvement of the countryside. One of the measures taken so far to meet these objectives include the nationalization of the banks. This is an attempt for the government to have greater control over commercial activities. The national government also established monopolies over many import and trading activities. Agricultural production became a prime concern of the government and facilities for irrigated farmlands were expanded. Many cooperatives were established particularly in agriculture, trade and industry.

By 1973-74 much of President Barre's plan was taking effect, especially the literacy program, when a withering drought struck. Thousands of animals died and about a quarter of a million people were left destitute. The government diverted its development efforts into relief actions, notably by opening several refugee centers.

In the meantime, the drought was having political effects. Famine in Ethiopia undercut Emperor Haile Selassie's authority and contributed to his deposition in 1974. Ethiopian Somalis in the Ogaden, under the framework of the Western Somali Liberation Front, undertook a guerilla campaign and by early 1977 controlled much of the Ogaden.

In March 1977, Fidel Castro tried personally to mediate the dispute between the two socialist states to no avail. Major fighting broke out and by September 1977, Somali insurgents had virtually routed the Ethiopian army.

Initially the USA tried to remain neutral by not supplying major arms to its long standing ally, Ethiopia. The Soviets and Cubans, however, supplied Ethiopia with jet fighters, tanks, other equipment and troops. Relations have since soured between Somalia and the Soviet Union while Somalia has been receiving aid from Western groups. Since 1977, Russia's new alliance with Ethiopia drove Somalia influence from the Ogaden and recast the politics of the region.

Today, while Somalia continues to be committed to its goals of Scientific Socialism, and Pan-Somalia unification, alliances with Western nations are an increasingly important focus.

2.4 THE NATURAL RESOURCE BASE

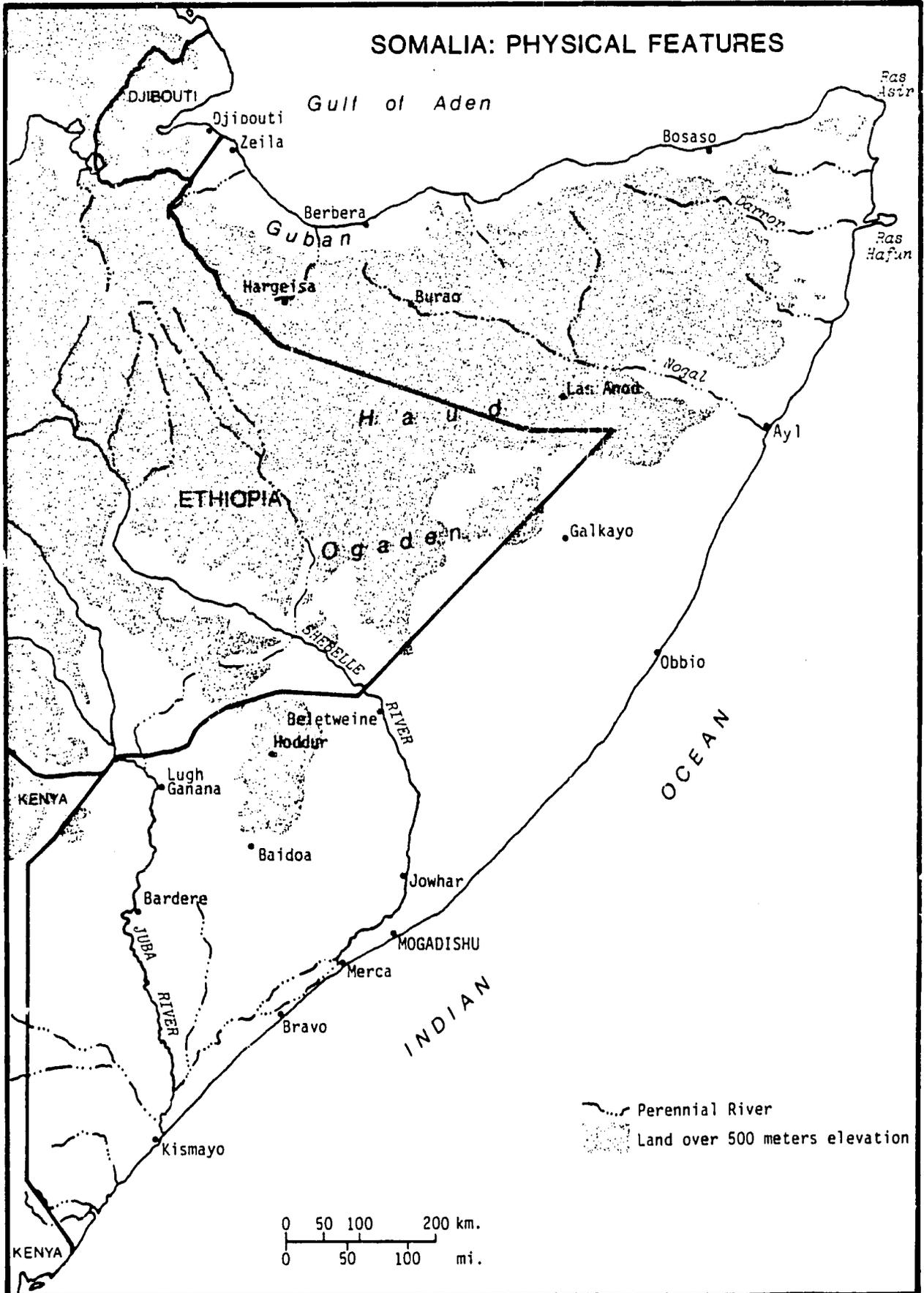
Physical Setting:

There are three major physical zones in Somalia. To the north, a low-lying, coastal plain runs parallel to the Gulf of Aden. In the central region, a high plateau rises from the coastal plain and drifts into Ethiopia's Ogaden where it forms the major watershed for Somalia's two large rivers. In the south, several smaller plateau ranges and valleys run down to the Indian Ocean (Figure 3).

Rainfall:

The northern coastal plain is very dry, with an annual precipitation between 50-100 mm. The local name guban means "burnt land," which describes the vegetation much of the year. Rivers in the area are small and flow only

FIGURE 3



SOURCE: The Times Atlas of the World 1981

for a few months after the rains. Grazing is limited to a few months in a year when 100 to 200 mm of rainfall provide modest amounts of food and water for livestock. There is very little agriculture in the northern plain. In the northwest, however, the average rainfall is 400 mm a year. This region has a semi-Mediterranean climate. Water and grass improve southwards into the interior. The central region, dominated by the Haud highland (Figure 3) provides some of the best grazing land in the country. Despite its extension into Ethiopia, the Haud has long been a grazing region for seasonal migration of Somalia's northern pastoralists, intensifying the border tension that has troubled the area for generations.

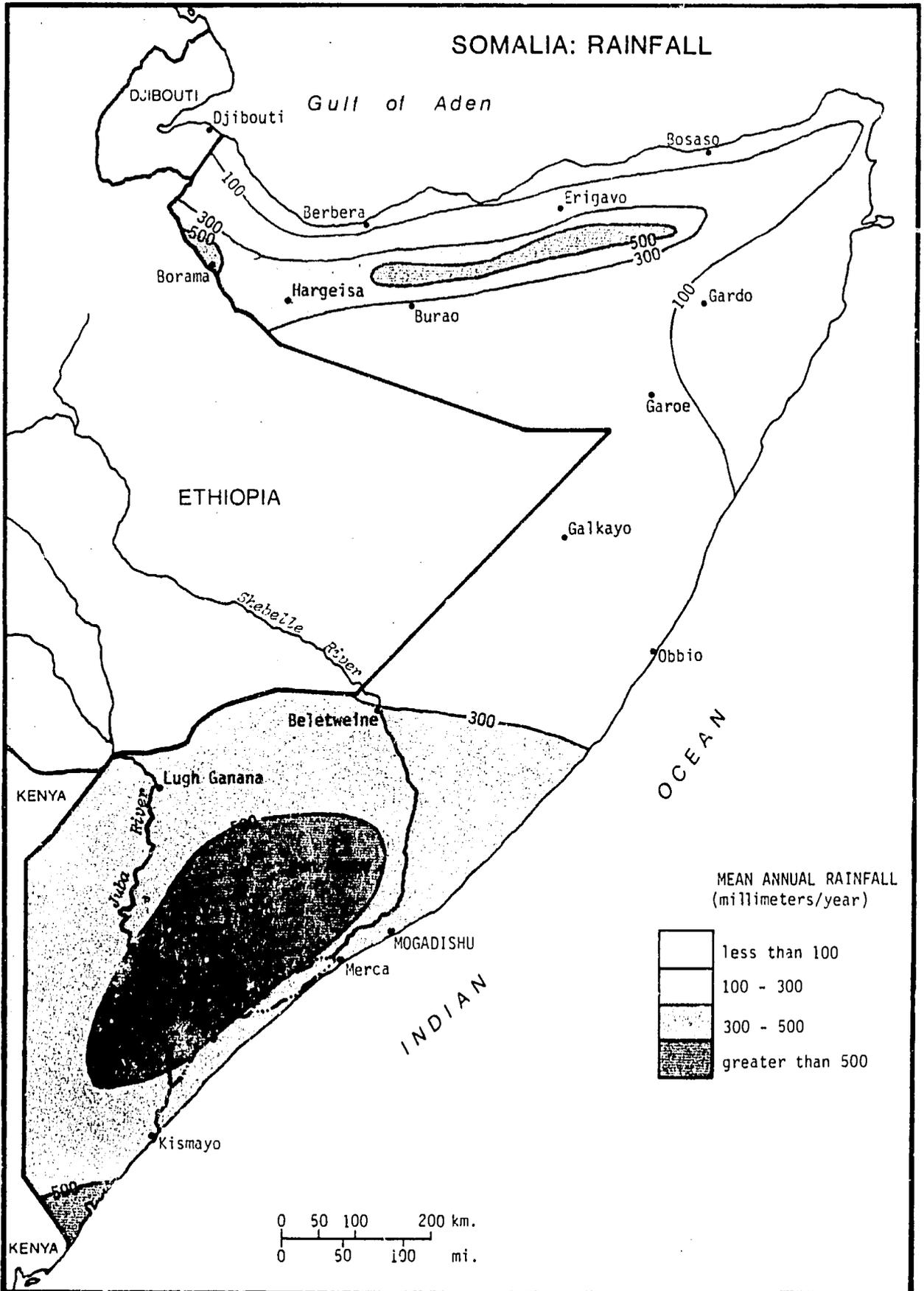
Somalia's southern zone is the best suited for agriculture, particularly banana plantations. Its rainfall system is part of the Indian Ocean monsoon weather pattern, similar to Kenya's in the south and west. The two rainy seasons are in April/May and October/November and are known as the gu and der rains respectively. Although some parts of the south receive up to 500 mm annual rainfall (see Figure 4), there is wide regional variability. The gu rains are the heaviest while the der rains account for 30 percent of the rainfall. Because these rains are unreliable, long term rainfed agriculture is risky. Barely half a million Somalis practice rainfed agriculture.

Generally Somalia's natural resources are limited. Some resources have been overused while others remain underused, but nonetheless the land, water and fishery resources available can be improved and made more productive.

Land Resources:

Based on the rainfall regime and the soil quality, 13 percent (8.2 million hectares) of the total area of Somalia is potentially cultivable annually while 45 percent of the country is suitable for productive grazing. Land under rainfed agriculture is underused because it can be used more productively if livestock activities are integrated with crop farming. Some rangelands, because they lack access roads and water, remain underused even though they are high quality rangelands. More important however is the overuse of most rangelands. This is indirectly related to the breakdown in the traditional ways of adapting to drought conditions. Traditional responses relied

FIGURE 4



SOURCE: World Bank 1981b, 157

primarily on migration as a means to lessen drought's harsh impact, but several factors now weaken migration's effectiveness.

First, border tensions with Ethiopia curb the free access which pastoralists traditionally enjoyed across the border. Since the turn of the century, the Ethiopian presence in the Ogaden has limited Somali migration options, resulting in more concentrated land use. Overuse has led to deteriorating productivity, and rangeland is fast reaching the limit of its ecological potential.

Herd sizes also seem to be increasing. Although no precise counts are available, observations by travelers and others from about 1900, after the rinderpest epizootic, seem to show increasingly larger herds. These herds may manage and even prosper during good moisture years although pressures become excessive during the bad. Overgrazing also eliminates some of the succulents and causes soil erosion.

Finally, private sector and government policies have created a series of randomly located watering points, wells, and cement water storage tanks in many parts of the country. In dry years, herdsmen bring their stock to the watering points, concentrating stock on the drought-stricken range rather than dispersing cattle as the old migration patterns did. Although there have been discussions about relocating watering points, political problems have postponed any action.

Water Resources:

Water resources are important for Somalia, however, their use is often poorly managed. Most of the available surface water is provided by the two main rivers, the Shebelle and the Juba. They are both in the south and constitute one of the nation's larger underdeveloped potentials. At present, about 34,000 ha of land are irrigated by the Shebelle river and 14,000 ha by the Juba, while the Shebelle has 80,000 ha of potentially irrigable land and the Juba has 160,000 ha. The choice of irrigation, though, carries with it a number of physical, economic, and political problems that are dealt with in more detail in Section 3.4.

Ground water resources also often remain underutilized in many areas in Somalia, although there are areas where ground water is insufficient for human and livestock needs. These supplies can be expected to meet the requirements of the foreseeable future if they are tapped in a judicious manner. While the extent of the aquifer is yet to be determined, however possible, overexploitation must be prevented.

Other Resources:

Mineral resources in Somalia include limited deposits of uranium, tin and gypsum. Gypsum exploitation has led to the establishment of cement, glass and ceramic industries. There are no known petroleum deposits or other major minerals other than the world's largest deposits of industrial salt. These deposits were worked by the Italians until 1939 but have since been abandoned. In the 1982-86 five year plan the government has made plans for the renewed exploitation of the salt deposits near Hafun.

The country's major means of livelihood must come from the land and water resources. Since crop production is a viable enterprise in only the southern third of the country, Somalia must depend on its herds. High priority must go to range, soil and water source protection. Adequate safeguards to limit degradation must also be instituted.

CHAPTER 3: KEY DEVELOPMENT ISSUES IN SOMALIA

3.1 INTRODUCTION TO THE NATIONAL ECONOMY

Issue: Somalia depends on agriculture for most of its exports, particularly livestock. Irrigated and rainfed agriculture and fishing are also important. Remittances from workers overseas are a very large source of foreign exchange. Manufacturing makes up only about ten percent of the national economy. Can the economy expand in ways to enhance development when balance of payments deficits are high and current sources of revenue are limited?

Somalia is, by common economic measures, one of the world's poorest countries. The average per capita income is estimated to be between U.S. \$140 to \$170. Most of the Somali people are either agriculturists or nomadic herders. The labor force is distributed roughly as follows:

industry--6-10%,
 trade, transport and services--10-13%,
 stock raising, herding--55-60%,
 irrigation and rainfed agriculture--15-20%.

An important part of the labor force works overseas, primarily in Saudi Arabia. Latest estimates, indicate that between 100,000 and 150,000 workers from Somalia are working overseas at any given time (Jamal 1983). This group of workers has an earning power well above the wage economy sector in Somalia.

The Somali domestic economy reflects the situation outlined above. Animal herds constitute a major national resource and include over 3 million head of cattle, 14 million sheep and goats, and 2.5 million camels (Evaluation Technologies, Inc. 1977).

In 1979 60 percent out of the total Gross Domestic Product, \$1,130 m, was contributed by agriculture, 29 percent by services and 11 percent by industry. Manufacturing, the most dynamic part of the industrial sector, accounted for 7 percent. (World Bank 1982).

Food crops, with the exception of bananas, are for domestic consumption. In addition, wheat, rice, sugar, and tobacco are significant imports. Maize and sorghum production is sufficient to meet normal domestic needs in good rainfall years, which average three out of every five years. Over the decade 1970-1980 the production of all major crops, except rice, declined. It is expected that sugar and rice production will increase when current plans for irrigation expansion are put into effect. Meanwhile the past decade has seen an increase in food imports. Even before the refugee crisis food imports increased at an annual rate of 9.7 percent.

Somalia's export base is very narrow. Agricultural exports constitute over 90 percent of total merchandise exports. Livestock and bananas provide the vast bulk of Somalia's foreign exchange earnings (93 percent, 82 percent and 82 percent in 1978, 1979 and 1980, respectively). Livestock alone make up the highest percentage of total exports. The Gulf states, chiefly Saudi Arabia, remain the exclusive market for Somali's single most important product, as many sheep, cattle and camels are sold to Saudi Arabia where Somali meat is preferred. In short, the economy is heavily reliant on one product--livestock--and one customer--Saudi Arabia. Even though bananas are a major export, production has been dropping and markets have become uncertain in recent years.

The steady export flow of food and livestock has not kept pace with the rise in imports, producing a chronic trade deficit. There have been growing imports of capital goods for development projects and a high rise in the cost of energy imports. In addition, the need for military equipment has added a further burden to the already tenuous balance of payments.

In part, the "ad volarem" remittance scheme for overseas workers has helped to provide a hidden flow of capital to the country, the true extent of which is difficult to calculate. Its obvious benefits are somewhat diffused by the fact that much of the money earned is spent on consumer items and the badly needed skills of overseas workers are missing. Meanwhile Somalia lacks the human resource base which it requires to effectively address its development problems.

The continued unsettled situation with Ethiopia, the refugee problem and fuel price increases are very heavy burdens on the fragile Somali economy. Most of the external resources have been depleted for payments on food and oil imports. Balance of payments deficits still remain a constraint despite substantial external assistance. The average annual rate of inflation was 12.4 percent during the seventies compared to 4.5 percent in the previous decade.

In a massive effort to diversify the economy, the Somali government has, through donor assistance, emphasized irrigation development for food and export crops, and the development of a sound national road infrastructure (Figure 6). There is also an effort to expand the manufacturing base beyond its current focus on food processing (sugar, grain milling, milk, and fish processing) and textiles and cement.

All of these efforts are potentially beneficial but suffer from current demands that divert the Somali government's attention and from chronic labor constraints at medium and higher technical levels.

3.2 LIVESTOCK IN THE NATIONAL ECONOMY

Issue: Livestock currently provides over 80 percent of exports, about 50 percent of the GDP and a livelihood for two-thirds of the population. However, as demonstrated during the 1974/75 drought, the sector is vulnerable. Despite the importance of livestock to Somalia, only a small percentage (5-8%) of development plan funds have been invested in that sector.

There are more than ten million livestock units* in Somalia, equivalent to 2.5 units per capita or 12.5 units per family. The national herd is estimated (from the 1975 census) to include 5.3 million camels, 4 million cattle, and 24.7 million sheep and goats (United Nations Sudano-Sahelian Office 1981) (See Table 2). The trend has been to increase the numbers of cattle because of their good market potential in Saudi Arabia. For example in Northern Somalia, the ratio of cattle to camel changed from 1:5.4 in 1954 to 1:1.8 in 1973; while in Southern Somalia the ratio changed from 1:1.4 in 1960 to 1:0.5 in 1973 (International Labour Office 1977). Throughout the country the ratio of camels relative to cattle has been decreasing. There are also high price incentives for exporters of livestock, due to an informal arrangement which allows the minimum export price to lag behind the actual export price. At the rate of exchange this arrangement indicates higher producer prices and therefore greater export of livestock.

Somalia has long exported modest numbers of animals to the Gulf states (which include Saudi Arabia and Yemen), but with growth in oil income, the meat market there has grown immensely. Saudis have a traditional preference for Somali thick tailed sheep, even though Australia is now trying to compete in this market. The increasing market for beef has complemented rather than competed with the sheep market (see Tables 3 and 4).

Most livestock are owned by nomadic or semi-nomadic peoples who have a long tradition of regular animal sales. Some calculations suggest that animal offtake is between 8 and 13 percent of total livestock value per year. It is generally noted, though, that stocking rates are too high and the offtake too

*Livestock units are calculated on the basis of FAO norms: cattle = 0.8; camel = 1.0; sheep and goats = 0.1.

TABLE 2

HUMAN AND LIVESTOCK POPULATIONS BY REGIONS, 1975 CENSUS

<u>Region</u>	<u>Area</u> <u>'000 km²</u>	<u>Human</u> <u>population</u> <u>('000)</u>	<u>Cattle</u> <u>-----</u>	<u>Sheep</u> <u>'000</u>	<u>Goats</u> <u>head-----</u>	<u>Camel</u> <u>-----</u>	<u>Animal</u> <u>Units¹</u> <u>('000)</u>	<u>Animal</u> <u>Units</u> <u>per sq.</u> <u>km</u>
I. North-West								
1. W. Galbeed	45	440	145	2,242	2,161	606	1,162	25.8
2. Toghdeer	41	258	44	917	852	302	532	13.0
Sub-total	<u>86</u>	<u>698</u>	<u>189</u>	<u>3,159</u>	<u>3,013</u>	<u>926</u>	<u>1,694</u>	<u>19.7</u>
II. North-East								
3. Sanaag	54	145	74	1,521	664	205	483	8.9
4. Bari	70	154	15	1,388	2,095	240	600	8.6
5. Nugal	50	87	12	223	611	155	248	5.0
Sub-total	<u>174</u>	<u>386</u>	<u>101</u>	<u>3,132</u>	<u>3,370</u>	<u>600</u>	<u>1,331</u>	<u>7.6</u>
III. Central								
6. Mudug	70	215	340	1,136	2,744	751	1,411	20.2
7. Galgadud	43	182	218	588	1,734	395	802	18.7
Sub-total	<u>113</u>	<u>397</u>	<u>558</u>	<u>1,724</u>	<u>4,478</u>	<u>1,146</u>	<u>2,213</u>	<u>19.6</u>
IV. Shebelle River								
8. Hiran	34	147	170	287	1,159	461	742	21.8
9. Middle Shebelle	22	263	382	325	720	205	615	28.0
10. Lower Shebelle	25	398	419	90	200	293	657	26.3
11. Benadir	1	380	22	6	19	1	21	21.0
Sub-total	<u>82</u>	<u>1,188</u>	<u>993</u>	<u>708</u>	<u>2,098</u>	<u>960</u>	<u>2,035</u>	<u>24.8</u>
V. Juba River								
12. Gedo	32	212	528	500	725	784	1,329	41.5
13. Middle Juba	23	216	366	25	720	236	603	26.2
14. Lower Juba	61	223	861	70	127	222	933	15.3
Sub-total	<u>116</u>	<u>651</u>	<u>1,755</u>	<u>595</u>	<u>1,572</u>	<u>1,242</u>	<u>2,865</u>	<u>24.7</u>
VI. Inter-Riverine								
15. Bakool	27	100	100	79	274	192	307	11.4
16. Bay	39	302	255	55	192	362	591	15.2
Sub-total	<u>66</u>	<u>402</u>	<u>355</u>	<u>143</u>	<u>466</u>	<u>554</u>	<u>898</u>	<u>13.6</u>
TOTAL	<u>637</u>	<u>3,722</u>	<u>3,951</u>	<u>9,461</u>	<u>14,997</u>	<u>5,428</u>	<u>11,036</u>	<u>17.3</u>

¹Cattle 0.8; camels 1.0; sheep and goats 0.1

SOURCE: World Bank 1981a, 49

TABLE 3

LIVESTOCK EXPORTS BY NUMBER OF ANIMALS
(000 head)

<u>Year</u>	<u>Sheep</u>		<u>Goats</u>		<u>Cattle</u>		<u>Camel</u>	
	<u>Total</u>	<u>Saudi Arabia</u>	<u>Total</u>	<u>Saudi Arabia</u>	<u>Total</u>	<u>Saudi Arabia</u>	<u>Total</u>	<u>Saudi Arabia</u>
1970	546	462	605	441	45	42	26	25
1971	608	513	576	451	56	44	24	23
1972	789	691	828	664	77	66	21	21
1973	709	604	675	547	68	49	29	29
1974	635	520	623	496	25	22	24	24
1975	793	623	743	615	40	39	34	34
1976	385	329	381	330	58	55	34	34
1977	461	421	442	401	54	53	35	35
1978	739	n.a.	715	n.a.	77	n.a.	22	n.a.

SOURCE: World Bank 1981a, 65

TABLE 4

LIVESTOCK EXPORT VALUE IN So.Sh
('000 So.Sh)

Year	Sheep		Goats		Cattle		Camel		TOTAL	
	Total	Saudi Arabia	Total	Saudi Arabia	Total	Saudi Arabia	Total	Saudi Arabia	Total	Saudi Arabia
1970	43.0	37.8	41.9	33.1	15.5	14.3	19.0	19.0	119.3	104.2
1971	46.8	40.8	41.4	34.9	18.5	13.2	16.6	16.4	123.4	105.3
1972	63.0	56.6	60.5	51.1	22.3	17.6	14.7	14.7	160.5	140.0
1973	72.7	60.3	65.6	55.0	35.1	32.5	23.3	23.0	196.7	170.7
1974	92.5	82.3	78.1	72.9	21.6	21.2	30.2	30.2	222.4	206.6
1975	154.3	137.2	146.8	133.5	33.5	28.5	47.4	44.2	382.0	343.4
1976	80.9	70.7	79.0	70.3	71.9	65.3	49.4	49.3	281.2	256.1
1977	95.5	86.8	94.1	85.1	41.7	39.9	48.2	48.2	279.5	260.1
1978										

SOURCE: World Bank 1981a, 66

low in relation to the carrying capacity of many areas. Low offtake is a particular problem in time of drought. For example, strong faith in and reliance on the livestock sector was shaken by the drought of 1974/75. Large numbers of animals and large grazing areas (Figure 5) were suddenly at risk. During 1975, there were only about thirteen million tons of forage produced in Somalia but the ten million livestock units required a total of thirty million tons! Such deficits may be partly offset by browsing and grazing in Ethiopia, assuming normal relations. But with the present conflicts, the calculations above indicate that the livestock industry places severe stress on Somalia's scarce natural resources.

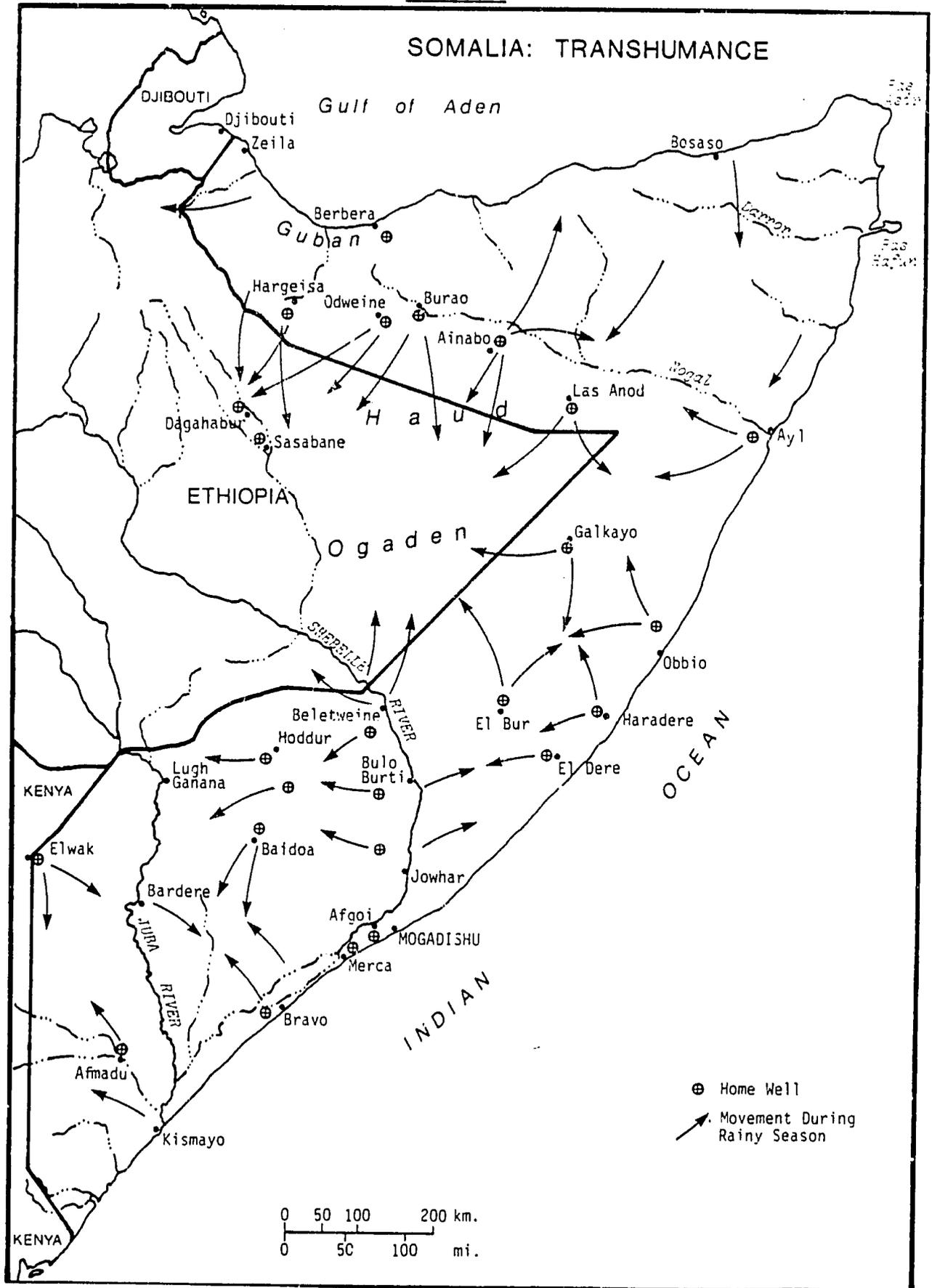
Part of the increased pressure on land and at least some of the deterioration in the resource base has been due to the increase in the settled population. More people live in the grazing regions, necessitating an increase in livestock numbers. Roughly sixty sheep and/or goats are the basic herd needed to sustain a family at subsistence level; as population increases, more animals must be added to the herd.

The land pressure problem also stems from the market-induced trend to raise cattle instead of camels. Camels maintain their status as the prestige animal for many nomads, but increasing numbers of live cattle are shipped to the Gulf Market from Somalia. As cattle need water more frequently than camels, they cannot wander too far from watering points. They graze less extensive areas than camels, but more intensively. Increased Gulf cattle sales will surely heighten land pressures and rangeland degradation.

Up to the present, livestock production and marketing have remained in private hands. Some commercialization of the industry (especially in cattle), has been part of the livestock sector for many years, including a complex marketing and transport network (see Figure 6). Further, cattle ownership is disproportionately concentrated among about 10 percent of the pastoral people. Other cattle owners live in urban areas. New commercial incentives, therefore, serve to increase cattle numbers without necessarily enhancing the economic status of the pastoralist.

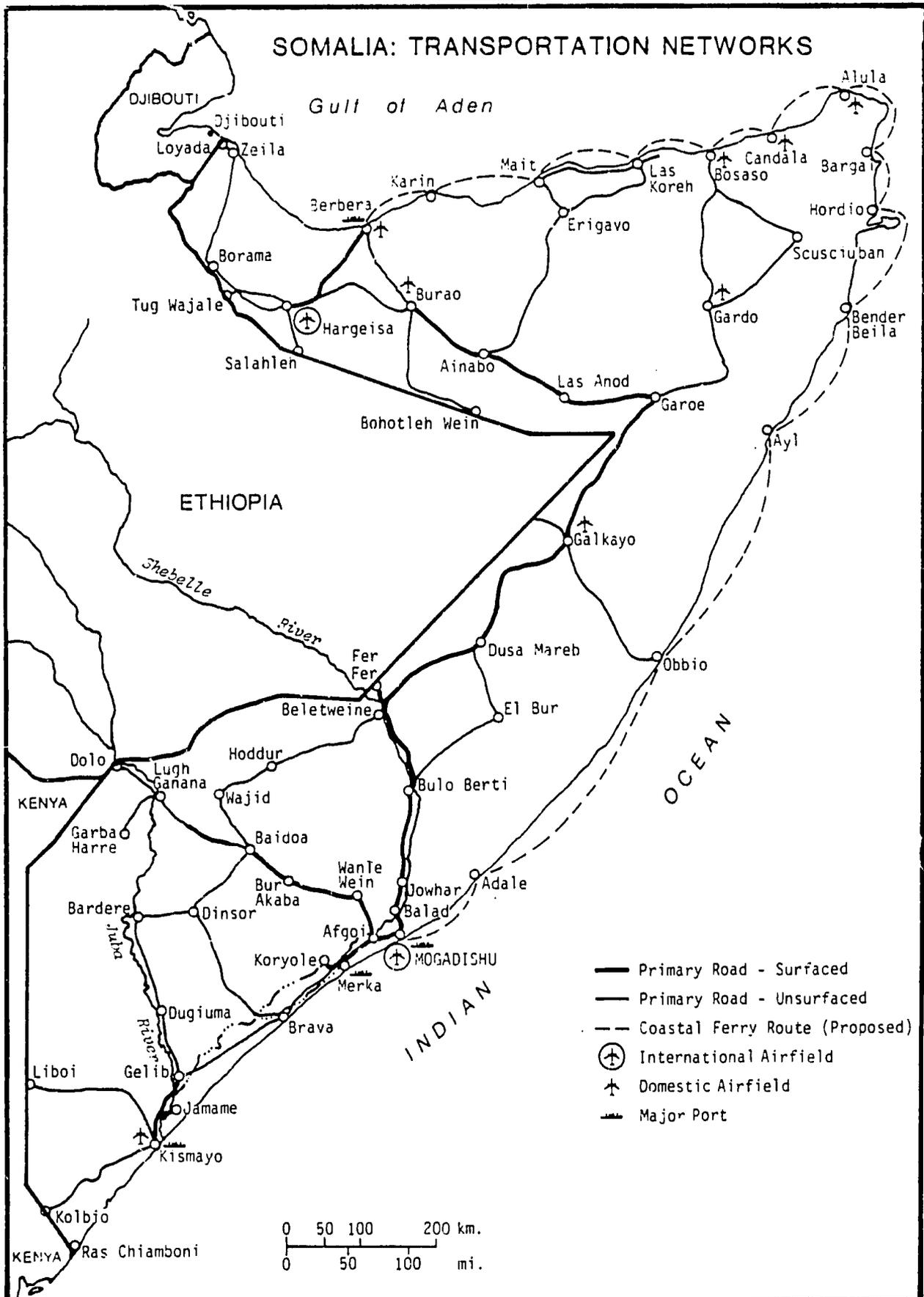
The government has not channeled significant development expenditures into this sector, perhaps because of the apparent effectiveness of private

FIGURE 5



SOURCE: Cassanelli 1982, 45.

FIGURE 6



SOURCE: World Bank 1981b, 205

arrangements for livestock production and marketing. In the 1974-78 plan, for example, less than 5 percent of funds were planned for livestock, and only 4 percent of the total agricultural budget was allocated to livestock.

The drought modified these percentages and several projects, including the central rangelands project, were begun. In the northern regions of Hiran, Galgudud and Mudug the rangelands are being upgraded. The general strategy now emphasizes provision of water, rangeland management, and upgrading social services for the nomadic population.

The future of this vital sector depends on further refining the marketing orientation. Some of the government's priorities center around improving animal health and providing the necessary infrastructure for transporting the animals. The hides and skins industry is also being improved to provide for the overseas market. The government is committed to developing training, facilities, extension services and agro-industries. Increased opportunities and incentives are given to pastoralists for moving into more settled modes of existence. About 60 percent of the Somali population are nomadic pastoralists and at the present rate of population growth the nomadic population must be stabilized at near its present level. Otherwise, livestock and rangeland productivity will decline further. Settlement plans are the preferred strategy often suggested.

3.3 RAINFED AGRICULTURE

Issue: Rainfed agriculture, especially when combined with modest livestock holdings, is an important source of national wealth. This sector contributes to maize and sorghum production in particular. However, most estimates suggest that these farmers are among the poorest groups in the country. It is important to look at ways of improving rainfed production as a means of raising the levels of smallholder well-being as well as contributing to Somalia's self-sufficiency in food production.

Rainfed agriculture is confined to areas having at least 400 mm annual rain, and is more reliable in those few regions which have more than 500 mm. Rainfed cultivation is therefore mostly concentrated in the south around the Shebelle and Juba basins. There is some settled crop production in some parts of the northwest also. Most rainfed agriculture is undertaken by private farmers. About 14 percent of the population, i.e., 600,000 people (110,000 families) are estimated to depend on the 540,000 hectares of cultivated land for their livelihood (World Bank 1981a).

Though estimates of available land vary widely, there appears to be room for considerable expansion of the area presently under rainfed cultivation. In the Bay region, for example, estimates vary from no expansion to a possible threefold expansion.

Similarly, there is little reliable information on the economies of the rainfed production system, and what data do exist appear to have excluded livestock potential from the calculations. Several estimates do agree that productivity presently is not high, reaching only 500 kg per hectare in good years and averaging only 300 kg over the long run. Sorghum and maize are the main grains produced (Table 5) and the rainfed production together with flood plain irrigation accounts for a very large part of the national production. (See Appendix II for the volume of agricultural crop production in Somalia in the 1970s.) Farmers produce primarily for subsistence and sell the surplus to the Agricultural Development Corporation (ADC). The data in Table 6 are

derived from the volume of grains purchased by the ADC. This is a rough measure of production trends. In normal years, Somalia is almost self-sufficient in these grains. However, rainfall is not reliable and in approximately one year in every five, harvests fall short. To compensate for these lean years, the small holders store grain in underground pits used both by the regional merchants for short term storage and by the farmers for multi-year safeguards. Though losses are high (approximately 30 percent), the system does ensure subsistence grains for the farmers through most drought periods. In years of poor production, no grain is available for sale to nomads and other non-growers.

Some integration of agriculture and grazing already exists. In each of the five regions where rainfed agriculture is practiced, there is still considerable animal wealth. Small farmers own at least some livestock as protection against bad years. Because of the inadequate supply of rainfall, rainfed agriculture remains a high risk undertaking in Somalia.

TABLE 5
DOMESTIC CROP PRODUCTION
(000 METRIC TONS)

	1969-71	1981
Wheat	-	1
Rice	1	5
Maize	110	120
Sorghum	132	150
Sugar cane	436	410
Bananas	136	65

SOURCE: Food and Agriculture Organization 1982.

A preliminary socioeconomic survey of part of the rainfed area (Middle Shebelle) suggests that little profit accrues to the farmers from grain production and sale, but it is difficult to tell whether these data were gathered in a normal or sub-normal year. It is clear that there has been little expansion of rainfed agriculture in the last decade or so, probably because government increases of fixed domestic prices have not created sufficient incentives

TABLE 6
 MAIZE AND SORGHUM PRODUCTION AND PURCHASES BY ADC
 (000 TONS)

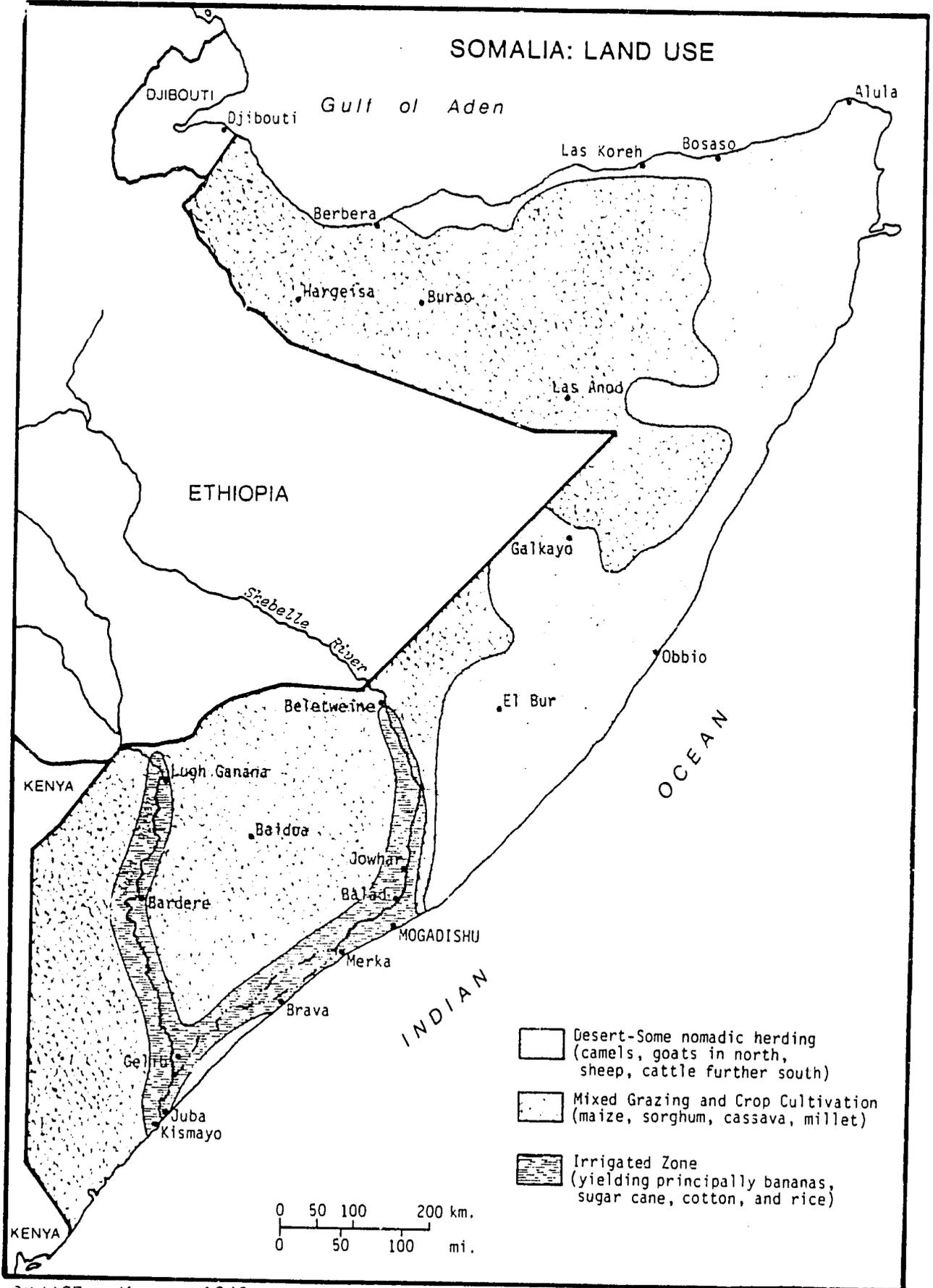
	1972	1973	1974	1975	1976	1977
<u>Maize</u>						
Production	114.9	98.9	97.0	103.6	107.6	111.3
ADC Purchases	63.9	15.3	18.4	31.7	36.5	21.3
as % of Production	55.6	15.5	18.9	30.5	33.3	19.0
<u>Sorghum</u>						
Production	149.0	128.4	125.7	134.7	139.9	145.1
ADC Purchases	35.3	21.4	9.6	19.5	17.5	51.6
as % of Production	23.6	16.6	7.6	14.5	12.5	35.6
Production of Rice						
and Beans	13.8	12.4	12.8	14.3	15.1	18.5
<u>Total Production</u>	277.9	239.6	235.4	252.7	262.7	275.0
<u>Imports of Cereal Products</u>	68.5	51.0	27.0	116.9	102.7	122.7
Apparent Consumption of						
Cereals	346.4	290.6	262.4	369.6	364.4	397.7

SOURCE: World Bank 1981c, 348.

so far. Yet it is the sector which can absorb the growing Somali rural population. Both the rangelands and the irrigated farmlands offer very limited opportunities for future employment.

The rainfed area (see Figure 7) could become a more vital and reliable part of Somalia's food production system if it could be regarded as a mixed sector of crops and livestock and if improved grains and new technology which could substantially increase production per family farm were introduced. If these two steps were taken, as for example in the USAID Bay region project, pricing and marketing issues would follow. Optimistically, rainfed agriculture could produce most of the sorghum and maize for Somali consumption and, combined with stock rearing, yield a profit. This strategy becomes increasingly important as flood irrigation is replaced by controlled irrigation which

FIGURE 7



SOURCE: Murray 1982

has higher capital outlays and concentrates on crops with a higher cash return. Rainfed agriculture in Somalia cannot be capital intensive because of the economic and social implications. The factors of production necessary for large scale mechanized farming are scarce in Somalia. With a rapidly increasing population the traditional labor intensive method will continue.

3.4 IRRIGATION

Issue: Irrigation from the Shebelle and Juba rivers is widely regarded as a productive force in Somalia's future agriculture development. Rice and sugar for home consumption, and bananas, fruits, and other crops for export are intended for a final irrigated area of over 300,000 ha of controlled irrigation and perhaps 50,000 ha of uncontrolled irrigation. Although technically feasible, there would be many problems in achieving this goal.

Currently, there are approximately 110,000 ha of uncontrolled flood irrigation and 50,000 ha of controlled irrigation in Somalia (World Bank, 1981a). Of the controlled schemes, 38,000 ha are on the Shebelle and 12,000 ha on the Juba. Out of the land potentially suitable for controlled irrigation, 160,000 ha are on the Juba and 85,000 on the Shebelle, though many of these hectares will replace the current flood (uncontrolled) irrigation. The Juba has a greater and more regular flow than the Shebelle but it has been developed more slowly despite its potential because it was Kenya's frontier for a number of years. Its flow varies from 4000 million cubic meters to 10,000 million cubic meters while the Shebelle provides only a quarter as much flow.

Initially, irrigation development came through private enterprise. Italian farmers on the lower Shebelle river concentrated on bananas as their major cash crop. Large farms still characterize the area, now mostly operated under the National Banana Board, though some cooperatives and two settlement schemes (Kurten Waarey and Sablaale) are based on irrigation.

In recent years, government has concentrated investment in this sector. In the 1974-78 plan, 96 percent of investment in agriculture was in crop agriculture, nearly all of it in irrigation structures, 21 percent on commodities, and small percentages allotted for research, other support, and institutional growth. The 1979-81 plan for irrigation included a major sugar plantation and factory on the Juba river, major increases in rice production, and diversification into other crops including cotton, fruits, and wheat. A series of dams have been proposed and some are underway to provide the necessary water (Table 7).

TABLE 7

ON-GOING AND PROSPECTIVE IRRIGATION PROJECTS, AUGUST, 1976

	Stage of Work	Completion Date	"Subjective" Completion Dates	Additional Area	Improved Areas
Afgoi-Mordinle Jowhar Offstream Storage	I	1977	1978	3,108	
Balad (cotton)	I	1977	1979	--	Land Down stream
Turda (cotton)	I	1978	1979	10,000	
Fanole I	F	1979	1980	2,400	
Juba Sugar (Phase I) Settlement Areas	I	1979/80	1981	8,133	
(to end Phase III)	T	1980	1981	6,145	
Sakow Barrage	I	1984	--	--	10,000
Kalanji	F		1979	--	Land Down stream
Northwest Agricultural Development	I		1979	300	
Improvement of existing commercial land	F		1981		25,000
Improvement of existing traditional land	I		1986		18,000
Avai	I		1982		500,000
Bardere Dam	I		1983	500	--
Golwein	F		1984		Land Down stream
Genale-Bolo Marerta	I		1985	1,500	
Juba Bardere Youte	PF		1985	16,540	11,330
Fanole II	PF		1987	10,000	
Juba Sugar (Phase II)	PF		--	10,000	
	F		--	5,223	

I - Implementation

F - Feasibility

T - Tender

PF - Pre-feasibility

1/ About 30,000 hectares by 1980 according to completion status. Of this the greater part will already be under some form of traditional production, often by flood irrigation. Thus, traditional production could fall by the equivalent of 25,000 tons of maize.

SOURCE: Berry; Taurus; Ford 1980, 39.

It is also hoped that irrigation will provide an outlet for the projected steady outflow of pastoralists from the nomadic sector. Originally, projects such as Kurten Waarey were launched as prototypes for nomadic settlement, but these settlement programs are well behind in their targets of people and hectares under irrigation.

One major problem which the irrigation projects face is water shortages. Efforts to solve this problem are directed at storing water through the construction of dams. Both rehabilitation programs and plans for storage dams must progress simultaneously. The Bardera dam project which was proposed for the Juba has been high criticized largely because of the very high cost and insufficient feasibility studies. The government is however optimistic about the potentials of the project for stimulating further regional development in the south. The 1982-86 plan focus on the completion of the \$630 m Bardera dam. Much of the assistance is from the European Economic Community. The dam will prevent floods, provide irrigation water and generate hydroelectricity.

A number of problems must be overcome before the full scope of these irrigation plans becomes a reality. First, Somalia's two major rivers are international rivers with Somalia on the downstream end of water flow. A long range view would hope for an international agreement for use of the rivers, but such an agreement is obviously not practical for the foreseeable future.

The twin problems of markets and labor for the irrigated sector are more immediate. The output of bananas (the main cash crop) has declined since 1972 as a result of the drought followed by a damaging flood, strong competition in the world market, and stagnant world prices. Bananas still make up 18 to 20 percent of Somalia's exports but current prospects are not good. Banana exports fell from 26 percent in 1972 to around 8 percent in 1978. Related to markets is the question of labor, labor conditions, and wage rates, all of which are dealt with in another section of this profile. The impact of labor availability and variability on the economy of the irrigated sector is difficult to judge.

In terms of settlement projects themselves, the problems of management adversely affect land production. A major investment in research and marketing is needed to propel irrigated agriculture into the highly productive sector, but these steps will take much longer than originally assumed. A more balanced approach among irrigation, rainfed agriculture, and livestock, then,

must be developed. Meanwhile, irrigated crop production should be geared towards the expansion of banana plantations in the Juba Valley where irrigation water is still available.

3.5 POTABLE WATER* DEVELOPMENT IN SOMALIA

Issue: Somalia is mostly arid or semi-arid, and only two rivers, the Juba and Shebelle, provide year round drinking water. Most of the rest of the country relies for part of the year on rainwater pools and for the rest on shallow wells or surface storage. Water supply in quantity and quality is a major constraint to the livelihood systems of much of the country.

Lack of good drinking water causes major health and development problems in Somalia. The two rivers serve their respective areas; the mountain ranges of the north are comparatively well watered by "home wells" and those excavated in the beds of the larger streams which drain the highlands. The Haud Plateau, an important grazing area, was formerly used only in the wet season because of water shortages. Since independence a number of lined haffirs and tanks have been built to extend the use of this range resource. It has also been a recent and expensive practice to truck water to the area in order to extend the grazing period.

Despite these innovations, water shortage was a critical factor during the last drought (1974/75) as rainfall failed and "reliable" wells ran dry. In much of central and southern Somalia, wells are widely scattered and water quality is poor, with saline and brackish water, especially in the dry period from September to November.

The importance of potable water for urban areas in particular need no additional emphasis. Only six out of thirty-eight urban systems have piped water supplies leaving well over 400,000 urban residents without reasonably safe water. The Somali Government and the USAID are providing more water for the rural and urban areas through several ground water projects especially in the Bay and Central regions.

*Potable water includes treated surface water and untreated but uncontaminated water from springs, wells and boreholes.

3.6 FISHING

Issue: Somalia's coastal fishery resources are among the most abundant in the world and unusually prolific for tropical waters. However, for a number of reasons--mostly technical and economic--the resource has been little developed. Can fishing become a major part of the national economy?

At present, fishing supports only about 90,000 Somalis or less than 2 percent of the national population. In 1978, the fishing industry landed only about 28,000 tons of fish, partly because of the abrupt withdrawal of Soviet technical aid, but mostly because the industry is underutilized. The following table indicates how far this yield fell below its estimated potential:

TABLE 8

POTENTIAL ANNUAL FISH CATCH

Tuna and mackerel	8,000 tons
Small pelagic species	100,000 "
Large demersal	40,000 "
Shark and ray	30,000 "
Spiny lobster (deep and shallow water)	2,000 "
Shrimp	400 "
Mesopelagic species	<u>not known</u> but large
TOTAL	180,400 tons

SOURCE: World Bank 1981b, 163

With the longest coastline (2,000 miles) of any African country, bordering the Indian Ocean and the Gulf of Aden, Somalia is well situated for fishing resources. The seasonal upwelling of cool water, especially along the Northern Somalia coast creates a highly nutritious environment under which fish thrive very well. The potentials of the fishing sector have not been fully tapped and it is estimated that the sector accounts for less than 2 percent of GDP.

Fishing in Somalia can be divided into two types--small scale fishing along the coast, and large scale deep sea fishing off the coast. Fishing communities along the coastal areas where there is an abundance of fish are far removed from existing population centers. There are not enough transport or storage infrastructure so most of the catch is salted and sun dried. The export value of fish in this form is very low. Table 9 shows fishing locations and catches from 1974 to 1978.

Deep sea commercial fishing was beginning to make steady progress by 1977 with the Somali-Soviet partnership started in 1974. The significant progress that had been made was interrupted in 1978 when Soviet technicians and their trawlers departed. The government has since acquired more trawlers but the fishing sector is still faced with problems of infrastructure with respect to processing and marketing. Berthing facilities are inadequate along the shore and there is a general lack of cold storage depots.

Difficult access to urban markets led to the decline of local fishing trade in the northern coastal settlements. Attempts to revive these fishing centers by the government were geared towards establishing them as resettlement centers for former nomads. Also, fishermen's cooperatives were established by the government but have not yielded success either as resettlement schemes or to increase productivity.

The government allocates a small part of the budget (So.Sh 27 million in 1979) to the fishing sector but the contribution of this sector to government finances is negative (World Bank 1981a). Despite efforts by government and other donors to improve fishing technology, the rate of growth of the industry is likely to remain slow. Dietary preferences in Somalia are not attuned to fish except in a few of the larger cities and the country as a whole has one of the world's lowest per capita fish consumption rates. Lack of mechanical skills among the fishermen and those living in new coastal settlements have greatly handicapped efforts to mechanize fishing boats. The performance of fish processing factories in Somalia has also been very poor as the factories are generally handicapped by the problem of raw material supplies. Only a small proportion of total output is processed and exported as canned fish or frozen fish and lobsters.

TABLE 9

FISH PRODUCTION IN SOMALIA
(Figures in tons, whole fresh landed weight,
estimated figure in brackets)

	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
1. <u>North Coast</u>					
Las Koreh	614	1,553	1,308	1,410	778
Bolimog	100	300	344	845	-
Habo	435	301	56	-	-
Candala	98	86	232	-	-
Curing & local	(700)	1,260	(1,200)	(1,100)	(1,000)
TOTAL	<u>1,947</u>	<u>3,500</u>	<u>3,040</u>	<u>3,355</u>	<u>1,778</u>
2. <u>East Coast</u>					
Eil	)			379	240
Adale	)			306	217
Mogadishu	)			(300)	430
Merca	)			(80)	61
El Hamed	)	(2,000)	4,400	(4,000)	72
Brava	)			226	123
Kismayo	)			(100)	100
Kulmis	)			232	225
Ras Chiamboni	)			(100)	102
Other centers	0			(200)	(200)
TOTAL	<u>2,000</u>	<u>4,400</u>	<u>4,000</u>	<u>1,923</u>	<u>1,770</u>
3. <u>Offshore</u>					
Fish	1,370	1,500	3,400	3,400	235
Lobsters	680	950	950	1,150	20
TOTAL	<u>2,050</u>	<u>2,450</u>	<u>4,350</u>	<u>4,550</u>	<u>255</u>
GRAND TOTAL	<u>5,997</u>	<u>10,350</u>	<u>11,390</u>	<u>9,828</u>	<u>3,803</u>

SOURCE: World Bank 1981b, 193.

The key to fishing development in Somalia will be markets. An effective internal and export marketing structure could foster broader participation in the sector and increase foreign exchange earnings for the country. The 1982-86 plan emphasizes fishing, particularly for export. Joint ventures are encouraged to help build up a coastal fleet. Ten new fishing ports are to be constructed along the coast from the northern border with Djibouti to Mogadishu. Equally important are plans to improve facilities and overcome labor shortages.

At present the performance of the fishery sector is modest but it is an important alternative for creating productive employment for the population which neither the livestock nor cropping sectors can accommodate. Coastal fishing in particular offers many employment opportunities. Efforts could also be directed toward integrating fish into the domestic food consumption pattern since it is a relatively cheap source of protein. Finally, one should be aware that measures should be taken to avoid over exploitation and thereby a rapid decline in fishing resources.

3.7 STRATEGY FOR RURAL DEVELOPMENT

Issue: Because the natural resource base in Somalia is largely rural the need for an effective strategy for rural development cannot be overemphasized. The general strategy for rural development in Somalia appears to include the following elements:

- (i) to improve social services;
- (ii) to make modest investments in the livestock sector but assume that people will leave this sector each year;
- (iii) to concentrate major attention on irrigation as a means of settling people who leave nomadism, as a means of feeding the nation, and as a means of earning hard currency through exports.

Do elements of this strategy need reexamination?

A comprehensive rural development policy would seek to develop parallel increases in productivity in rural Somalia's three major sectors: livestock production, rainfed agriculture, and irrigation. At the same time, attention should be directed to social improvement and other institutional support in the rural areas. Achieving these goals may seem difficult, but it is worth pursuing because the different segments of the strategy are complementary. The sectoral orientation if based on separate sectors, presents a major problem, because the main benefits accrue only if the different sectors are interwoven. Each sector has its own merit: rainfed agriculture effectively puts the moist regions of the country into productive use; for livestock activity, the market prospects are good over the foreseeable future and it is the best, sometimes only, use for Somalia's drier land area.

Irrigation is also a clear priority, but there is danger in relying too heavily on irrigation farming as the remedy to a wide range of rural development issues. As some of the current settlements indicate, former nomads are slow to accept irrigation farming, and reliance on large scale irrigation presupposes a set of managerial, labor, and economic institutions which may not exist. A series of integrative measures offers a possible solution. Modest water control efforts may be included in livestock development; irrigation and

livestock may become part of an integrated production system; rainfed agriculture could be part of a grain/meat production system. Each combination could lessen risk and increase productivity.

For example, at present localized irrigation by tube wells cannot be established as part of the range management activities every where, but in some cases, such integration may be possible and desirable. Concentrated production of vegetables and fruits in oasis type agriculture is another approach for training agriculturalists in an environment where livestock are also part of the system. This approach might also provide a nucleus for the service centers which would serve as a focus for nomadic health and educational services. Prudent planning in such a vulnerable environment would include a real integration of livestock and farms in the rainfed areas.

Finally, if tsetse flies can be cleared from the areas along the rivers-- a reasonable possibility, as the affected areas are not unmanageably large-- livestock and small scale irrigation might be integrated. Irrigation and livestock combinations would be beneficial if the current national trend towards cattle production continues.

If each of these approaches seems unrealistic, especially with the addition of necessary social and marketing services, one must compare them with some of the current plans under consideration. The proposed efforts are more practically grounded and certainly entail less risk for farmers and pastoralists. Rural development in Somalia is not easy but there are considerable resources in the country that would be more effective if brought together. If each sector is treated separately, much mutual reinforcement may be lost. A genuinely integrated activity such as the Bay region project will provide a means of researching and testing such approaches. Successful rural development involves integrated or linked approaches and, for Somalia, this is best done at a regional level.

3.8 SETTLEMENTS: THE RECORD AND THE FUTURE

Issue: As a result of the displacement and distress of nomads during the 1974/75 drought, three agricultural and three fishing settlements were established and were in operation by mid-1976. These were meant to become prototypes for future settlement of nomads, but for a variety of reasons they are now serving much fewer people than anticipated and have been slow to become viable economic entities.

Somalia was hard hit by the drought of 1974/75. Estimates of the loss from the drought range from nineteen thousand to thirty thousand human lives. One million head of cattle were lost, 800,000 camels and 5.7 million goats and sheep (Evaluation Technologies, Inc. 1977). The Somali Government provided shelter for about 270,000 people in relief camps (Somalia, Government of 1979a). After the onset of the rains in 1975, about 120,000 people were permanently settled in the camps while the others were relocated to agricultural settlements at Kurtenwaarey and Sablaale on the Shebelle river, and Dujuma on the Juba river, as well as to fishing camps. The agricultural projects at the settlements are based on both rainfed and irrigated production. The major food commodities produced are maize, rice, groundnuts, sesame, sorghum and cowpea.

A total of 12,000 former nomads were rehabilitated in the coastal fishing settlements (Hancock 1977a) at Ayl, Adale and Brava which was the largest fishing camp. The distribution of the settled population in these places in 1975 is shown in Table 10.

The cultural transition from a nomadic way of life to a settled one was not as dramatic as expected. Many drought refugees returned to the rangeland. By 1979, about half of the original settlers remained in the camps, with age and sex distribution as indicated in Table 11. Dujuma camp had encountered a special problem: its soils proved to be poor and not suitable for irrigation, necessitating movement to another location. Fishing camp plans were also complicated by the withdrawal of Soviet aid. Some progress has been made recently, although productivity had remained as low as in other Somali fishing villages.

The two remaining settlements, Kurtenwaarey and Sablaale, continue to function under the Settlement Development Agency, but plans for them have been substantially revised and expenses continue at a high level. In the period 1979 to 1981 a total investment of So.Sh 18,906 million was planned for rain-fed agriculture and So.Sh 42,782 million for irrigated farms.

TABLE 10
POPULATION DISTRIBUTION IN SETTLEMENT CAMPS

Center	Children	%	Adults	%	Total
A. Agricultural Settlements					
1. Dujuma	24,713	52.1	22,720	47.9	47,433
2. Sablaale	16,632	56.3	12,905	43.7	29,537
3. Kurtenwaarey	<u>14,759</u>	<u>55.5</u>	<u>11,834</u>	<u>44.5</u>	<u>26,593</u>
Subtotal	56,104	54.2	47,459	45.8	103,563
B. Fishing Settlements					
4. Brava	3,507	52.8	3,137	47.2	6,644
5. Ayl	1,638	54.0	1,395	46.0	3,033
6. Adale	<u>2,562</u>	<u>54.0</u>	<u>2,182</u>	<u>46.0</u>	<u>4,744</u>
Subtotal	<u>6,707</u>	<u>53.4</u>	<u>6,714</u>	<u>46.6</u>	<u>14,421</u>
	63,811	54.1	54,173	45.9	117,984

SOURCE: Somalia Settlement Development Agency and Somalia National Range Agency 1977.

The settlement projects have proved more attractive to younger people, and there are low proportions of middle aged and older men. The low ratio of men/women in the 31-45 age group (1:2 or less) suggests that some part of the families are elsewhere, perhaps herding animals or earning wages, to provide support through the extended family system.

Plans for introducing irrigation in both settlements have been cut back significantly, partly as a result of lower numbers of people than expected, but also because of problems of land clearing and water supply. So far, at

TABLE 11
AGE AND SEX PROFILE: SETTLEMENT CAMPS

<u>Age Groups</u>	<u>Kurtenwaarey</u>		<u>Sablaale</u>	
	M	F	M	F
0- 5	1280	1214	1175	1223
6-14	3707	3033	4253	3155
15-30	2263	3323	1998	1803
31-45	819	1917	715	1410
46-60	381	444	292	303

Kurtenwaarey, about 1000 ha have been irrigated and cultivated, compared with 600 ha at Sablaale. A recent report suggests that the goals should be 1500 ha in each, in contrast to original plans of five times that amount. In late 1979, 1000-1200 people were employed in agriculture at Kurtenwaarey and in terms of the strictly agricultural inputs, the agricultural activities were approaching a break-even situation, not accounting for considerable past capital inputs. The settlements, however, consist of a range of other activities which contribute to their economic situation. Originally, self sufficiency was expected by 1980; now it is planned to be achieved by 1983. Gross output has improved and by 1979 had reached So.Sh 3.3 m or 4,403 So.Sh/ha but inputs have been considerable, as much as U.S. \$2,000 to \$3,000 (So.Sh 12,000-18,000 So.Sh) per person.

The consensus of international agencies seem to be that only very little improvement can be expected in the economic situation of both agricultural and fishery settlements over the next few years. Even though there is an impressive range of permanent social infrastructure, there is an acute need for management and technical expertise. These have to be provided if the objective of self-sufficiency in the settlement camps is to be realized during the planned period.

Settlement schemes in Africa as a whole have not proved easy successes, nor have those in Somalia. Such work will need to be monitored more carefully as plans and strategies for the settlement of nomads evolve.

3.9 THE REFUGEE PROBLEM

Issue: The heavy burden of an influx of refugees on a poor country like Somalia was alleviated through massive government and international assistance. As starvation and living conditions improve the more important issue to address requires a switch from short term assistance to strategies which will allow refugees to move towards self-supporting activities.

The refugee problem in Somalia is, no doubt, the most serious in Africa and possibly in the world. Earlier estimates of the numbers of refugees were probably over counts and since 1980 there has been more accurate estimates. The total number of refugees in the country at the end of 1981 was approximately 700,000. In 1980, the period when the refugee population reached a peak, the estimated numbers of refugees ranged from 1.5 million to 1.75 million. The numbers had grown steadily from 100,000 in 1978 to 713,000 refugees in the camps by 1980. Estimates of other refugees who live scattered among the local population range from 300,000 to 1 million. Because some refugees have since returned to their nomadic lives and also because of more accurate counting, the total numbers of refugees has declined and stabilized at under one million. The most recent and reliable estimate is given by the United States Committee for Refugees as 700,000 (Tripps 1982, 9).

The origin of the refugee crisis in Somalia has been identified as man-made since the refugees are victims of the Ogaden war between Ethiopia and Somalia. The conditions of the refugees has, however, been worsened by a natural disaster, the Sahel drought. The Ogaden is a region controlled by Ethiopia but inhabited by ethnic Somalis. In 1977, the government of Somalia, in an attempt to separate the Ogaden from Ethiopia, launched an attack on the Ogaden and took over almost 90 percent of the region. Soviet and Cuban troops backed Ethiopia and regained control over the Ogaden by the end of 1978. Thousands of Somali and non-Somali people fled the Ogaden and other parts of Ethiopia into Somalia. As guerrillas of the Western Somalia Liberation Front (WSLF) continued the fighting, the numbers of refugees into Somalia increased significantly.

Apart from the bloody destruction of their villages, inhabitants of the Ogaden were faced with the longest drought in thirty years and were forced to cross the border into Somalia. The cost of accommodating such a huge influx of refugees was burdensome for a poor country like Somalia. The concentration of refugees was one of the biggest in the world--one refugee for every five Somali. Even though the government of Somalia provided internal support for the refugees at the beginning of the crisis, it had to seek international aid in 1979, almost a year after the onset of the refugee crisis. Unfortunately, the international relief system responded with too little, too late and too irregularly to meet the needs of the Somali refugees. Substantial aid did not arrive until the second half of 1980.

The Somali government has been committed to keeping the situation under control. Until the middle part of 1980, the major concern of the government and the bilateral donors (especially the United States and European Community) was to feed and care for the refugees' basic needs in the camps. Large scale starvation was prevented because the government was willing to use up its own food stocks to extremely low levels. Refugees are located in camps throughout the country (See Figure 9). In September 1980, there were twenty-six permanent refugee camps and four transit camps in Somalia (United States Agency for International Development 1982, 8). The camps were generally large and provided shelter, food and health care for as many as 20,000 to 65,000 refugees in the permanent camps. Problems, however, remain about inadequate food, water and fuel supplies.

A significant feature of the refugee camps, like the settlement schemes, is their demographic characteristics particularly the age-sex composition.* More than 75 percent of the families have female heads. In 1978, about 80 percent of the refugees in camps were children under age fourteen. These were among the 150,000 most needy refugees out of an estimated, 500,000 refugees in the country at that time. Generally, three out of five refugees in the country are children (Adepoju 1982, 31). The rest are women and older men. Men in the age groups fifteen to forty are conspicuously underrepresented. It is possible that many of the men have remained in Ethiopia, fighting or herd-

*The age-sex composition may be slightly biased as children and women are usually recognized by relief agencies as the most needy.

ing, or they may be among the unrecorded refugees generally at large within Somalia, herding, working at wage employment, living with urban relatives and seeking other forms of sustenance.

There are conflicting reports about the living conditions in the camps. It is reported that many children in the camps are severely malnourished but few are critically ill. Despite the overcrowded, diseased and poor living conditions in the camps, it is believed that the death rates appear to be about normal. There is very limited data on infant mortality rates and little or no information about the refugees' education status or skills.

By and large, it is widely agreed that the refugee situation in Somalia has improved, and the present problem is to reduce the dependency status of refugees by providing self-reliance activities. The more preferred solution to the refugee problem is voluntary repatriation to Ethiopia. However, despite favorable rains in 1981 the economic and security uncertainties in Ethiopia weigh heavier and discourage most refugees from returning.

In the immediate future, therefore, it would be realistic to expect continued relief support for the refugees in Somalia. In particular greater attention should be paid to the supply and management of food aid. A joint STATE/AID team to Somalia in January 1982 warned against encouraging too much dependence on food handouts because it could hinder local production (United States Agency for International Development 1982). Maintenance costs should gradually be transferred from international donors to the refugees themselves through self help projects. Agriculture and forestry are two potential sectors into which refugees can be absorbed for employment. In some cases refugees may have to be relocated to areas with more suitable land and water resources for farming. Pilot programs are underway and more opportunities are provided for refugees to be self reliant. For instance rudimentary primary and adult education is available in camps and efforts are being directed towards allocating land for agriculture and providing technical assistance.

As much as possible the Somali government intends to manage and monitor the implementation of projects and activities directed towards refugee self-reliance. This is an attempt to discourage large scale permanent settlement in Somalia by the refugees. The country cannot fully integrate the refugees

nor can government or international support for the camps continue indefinitely. By providing educational skills, especially vocational education, and employment opportunities for the refugees the government hopes to induce refugees into earning their own living in the future. While the long term expectations of repatriation are still unattained, some "push" strategies are to be pursued. In short, these would require "that the refugee families supply labor for subsistence received, and that refugees begin to absorb the same economic risks borne by the surrounding Somali population in agricultural activities" (United States Agency for International Development 1982).

As the government continues its policies to rehabilitate the refugees, the feasibility of the projects need to be well addressed. For instance, the age-sex composition of the camps may not make it possible to attain the production levels anticipated in the agricultural projects. Also, relocation efforts must be better planned judging from the failures of the drought resettlement schemes for nomads in the mid 1970s. Starting in 1982, farmland has been allocated to some refugee families. There is as yet no definite measure to ensure that refugees do not refuse to give up the plots in future. Self sufficiency remains a problematic task especially since many camps are in areas that do not provide opportunities for easy resource development. Any program will be a complicated task and necessarily involve examination of a wide range of possible strategies, including ways to integrate the refugee program into Somalia's mainstream development planning. The solution chosen will involve close coordination among international donors and the Somali government.

3.10 ENVIRONMENT AND DEVELOPMENT--THE MAJOR ISSUES

Issue: The Somali environment is almost entirely arid and semi-arid. Four major environmental concerns are: deterioration of the nation's rangeland; impact of irrigation; health problems; and problems of obtaining adequate fuel supplies.

Somalia has a wide range of soils and topography but a much smaller variation in climate. Most of the north and central parts of the country are arid; only the southern third is supplied with 400-500 mm mean annual rainfall. Two substantial rivers provide only moderate supplies of water. The three land based agricultural systems, livestock rearing and rainfed and irrigated agriculture, are responses to this environment. Together they create four major environmental concerns:

Deterioration of the Nation's Rangelands

The range resources of Somalia comprise approximately 90 percent of the total land area. About 80 percent of the population is engaged in livestock production. Seventy percent of national livestock production takes place in the arid and semi-arid range lands in northern and central Somalia (United Nations Sudano-Sahelian Office 1981). These areas are highly vulnerable to desertification which would mean a degradation of the range resources.

Over the past two decades, there has been a steady increase in both animal and people. Currently the national herd of cattle, camels, sheep and goats is estimated to be 35 million head, or over 10 million livestock units (Section 3.2). The drought of 1974/75 highlighted the increasingly pervasive problem of overstocking. It is estimated that the total fodder growth in Somalia is less than half that needed to feed the national herd. The deficit may in part be made up by animal browsing instead of grazing and also by extensive grazing on lands outside the national boundary.

There was a substantial deficit of fodder within Somalia itself during the drought, causing increased national concern about grazing area deterioration and the lowering productivity of the livestock sector. Little detailed data

exist, but air photo and satellite images show intense erosion spots around water holes and wide areas of more generally degraded land. In addition, there are some particularly large areas of blown sand in the coastal zone north and south of Mogadishu, though this does not appear to be caused directly by grazing. Emphasis of development plans has thus been changed to recognizing range conservation as a major consideration.

Because of the significance of the livestock industry on the economy of Somalia, the government has developed a policy of Rangeland Improvement. The objectives of the policy as contained in the 1979-81 Three Year Development Plan centered on increasing range capacity, creating reserves, improving stock water resources and providing education and training for management of the rangelands. Following the drought, the National Range Agency was established in 1976; it organizes the plans for range development. Two important drought rehabilitation projects started since 1976 are the Northern Rangeland Development Project and the Central Rangelands Development Project. In the Three Year Development Plan, 40 percent of the expenditure for the livestock sector is devoted to rangeland development (So.Sh 251,363).

Finally, by investing in forest reserves, additional shrubs and trees are available for livestock to browse on as an alternative to grazing. Also woody vegetation prevents both soil and wind erosion and provides a source for building wood and fuelwood.

Irrigation

Irrigation is another major development activity in Somalia, primarily in the south, and it is a vital part of the Somali governments plan for future food and export production. Apart from the difficulties of construction and maintenance costs, irrigation schemes have a number of actual and potential adverse environmental impacts which need to be monitored carefully to ensure that the objectives for this sector are realized. Waterlogging, salinity, increasing numbers of water related insects and associated diseases (especially malaria and schistosomiasis), and weed growth are major problems in the irrigation schemes. As irrigation is expanded, so too will these problems. In other countries, irrigation investment returns have been greatly reduced, therefore, safeguarding such returns is an important consideration in Somali irrigation

expansion. A summary of major irrigation projects in Somalia and the expenditure for expansion is shown in Table 12 below:

TABLE 12
EXPENDITURE ON IRRIGATION DEVELOPMENT
So.Sh 000

<u>Ongoing Projects</u>	<u>Expenditure 1979-1981</u>
1. Balad Irrigation Development Lower Shebelle	23,145
2. Afgoi-Mordinle Irrigation Project	35,797
3. Fanole Irrigation Project	180,000
<u>New Projects</u>	
4. Construction of Bardheere Reservoir (Juba river)	240,800
5. Maganbo Irrigation Project	107,114

SOURCE: Somalia, Government of 1979a 116-117.

Environmental Health

Irrigated agriculture increases environmental health problems because the new schemes extend beyond irrigation. The problems include water pollution and poor water quality in many wells; widespread water-related disorders like dysentery; nutritional problems among many of the rural poor; and sanitation disposal problems in the nation's large and small cities.

One important objective of the government in water development is the provision of adequate, reliable and safe water for domestic, livestock, agricultural and industrial use throughout the country, at reasonable prices and within easy reach of all potential users (Somalia, Government of 1979a, 165). Out of a total planned expenditure of So.Sh 395,716 on water development in the 1979-81 development years So.Sh 250,350 was devoted to urban water supply. In 1975, 33 percent of the population had access to safe water (World Bank 1982). The problems of environmental health and sanitation are discussed further in the next section.

Fuel Supply

Most households in Somalia obtain their fuel supply from wood and charcoal. Despite the low population density in the country, the pressure on fuel resource has been very great in the past decade. The shortage of woodfuel preceded the influx of refugees. At the drought resettlement scheme in Kurtenwaarey for example, the settlers had to depend on truck transportation for fetching wood as far as fifty miles away. The situation is most acute in the semi-arid areas which are poorly wooded and have since been largely deforested. Although the generally low rainfall limits wood supplies, there is no data to illustrate the extent to which wood cutting has added to land deterioration in the drier areas. Yet experience from other countries suggests that intensive wood cutting may be a considerable factor.

In the southern part of the country where land is being cleared for irrigation and crop farming, shortage of fuel supply is a major problem. Wood has to be transported from great distances to Mogadishu, as well as other densely populated parts of the country. Apart from domestic fuel supply in the traditional sector, the modern sector in Somalia is also faced with inadequate energy supplies. This sector, including transportation, relies on imported oil which will have to be paid for by the country's exports.

In summary, these and related environmental issues are important to Somalia's development program. A national assessment of both the relative and actual importance of each of these and other resource issues must be undertaken.

3.11 HEALTH

Issue: Although the government of Somalia has made major strides in providing social services, improvement in health and medical services has not been a major focus of attention. The improvement of health services especially in rural areas is now becoming an important development goal which is difficult to implement.

In a country of incomplete statistics, data on health are particularly hard to verify, even when they exist. Vital data suggest a life expectancy of 44 years (World Bank 1982) and an infant mortality rate of 146 per 1000 births. Estimates of the crude death rate range between 20 and 24 per 1,000. There is a dearth of fully qualified medical practitioners outside main towns, and statistics show a higher ratio of hospital beds per capita and a surplus of medical services concentrated in the towns. The literacy campaign of the early 1970s included much general environmental health training. Unfortunately at a time when the Government of Somalia was beginning to focus attention on rural areas, a major part of the resources and personnel was diverted to the great influx of refugees.

Despite the lack of statistics, there is a wide range of health hazards in Somalia: shigellosis, malaria, diarrhea, tuberculosis, and schistosomiasis are among the most common. Communicable diseases make up 60 percent of causes of death.

Schistosomiasis is related to the spread of irrigation in Somalia and other irrigated lands. Available data indicate a wide incidence of schistosomiasis, often in areas more than twenty miles from the permanent river. Likewise, despite the country's dryness, 93 percent of the people live in areas where malaria is widespread for part of the year. Dysenteric diseases affect 20 to 76 percent of the population sample in various studies of rural peoples. Other common diseases identified in these studies were whipworm, pinworm, hookworm, tuberculosis, and skin, eye, and venereal diseases.

Dietary and nutrition studies show a general malnutrition as well as iron, riboflavin, niacin, vitamin C and vitamin A deficiencies. Table 13 provides a

TABLE 13

ACTUAL AND REQUIRED NUTRITIONAL LEVELS IN URBAN, RURAL, AND NOMADIC AREAS
(1964)

Location	C A L O R I E S				P R O T E I N S (g)			
	Required Level	Consumption	Deficiency	Deficiency as % of Required Level	Required Level	Actual Consumption	Deficiency	Deficiency as % of Required Level
<u>Urban Areas</u>								
Hargeisa	2,169	1,736	413	20.0	62.8	51.0	11.8	18.8
Burao	2,225	2,010	215	9.7	64.0	61.0	3.0	4.7
Berbera	2,212	1,746	466	21.1	65.0	45.0	20.0	30.8
Erigave	2,200	1,969	231	10.5	65.0	54.0	11.0	16.9
Laskoray	2,200	2,206	(-)	-	65.0	52.0	13.0	20.0
<u>Rural Areas</u>								
Balad	2,209	2,209	(-)	-	64.7	55.0	9.7	15.0
Warseck	2,347	2,347	244	10.4	67.0	50.0	17.0	25.4
<u>Nomadic Areas</u>	2,160	1,065 ¹	1,095	50.7	64.8	32.5 ¹	32.3	49.8

¹The survey was carried out in the dry season, which could explain the very low consumption.

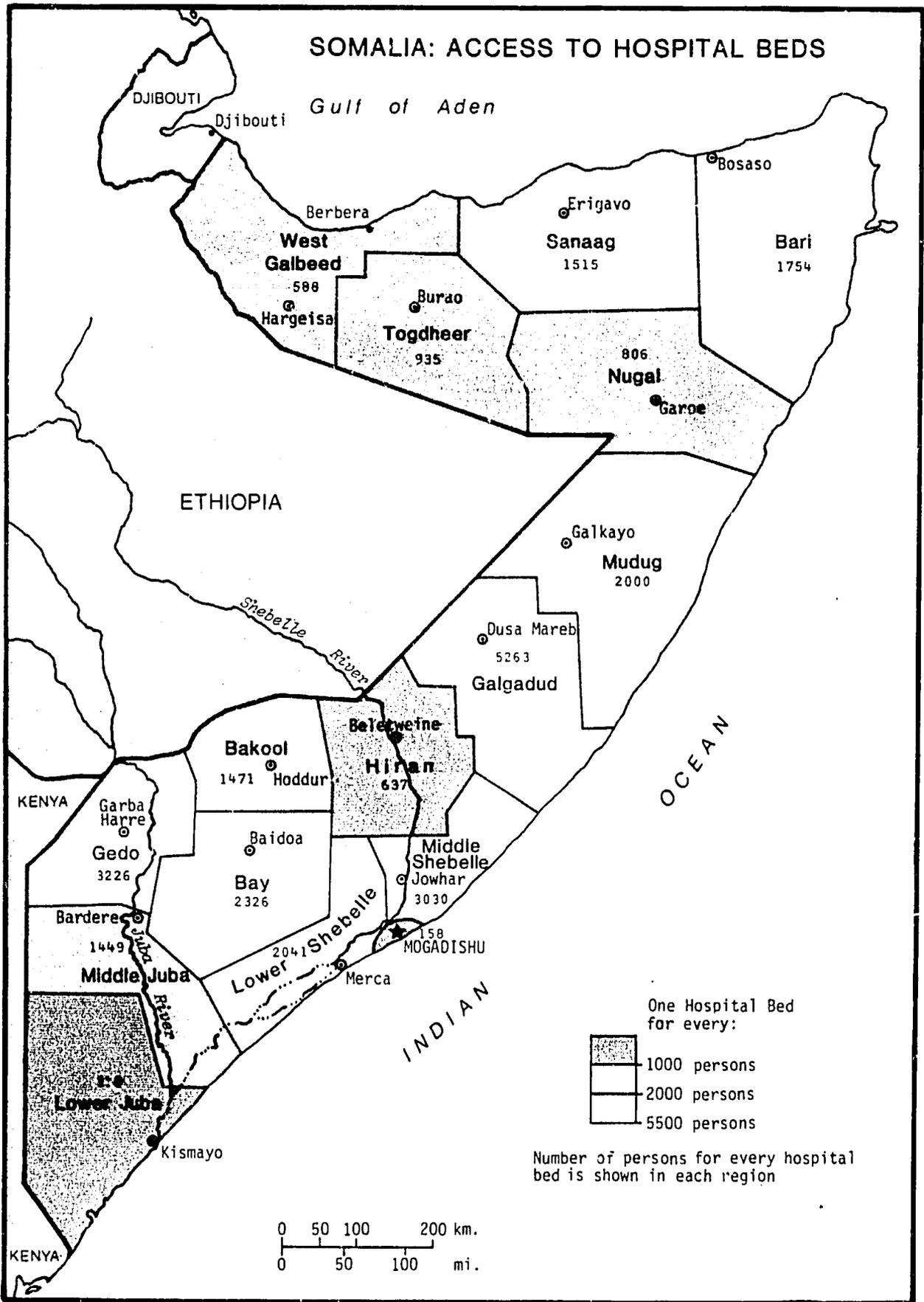
SOURCE: International Labour Office 1977, 390.

summary of the data on nutrition levels in urban, rural, and nomadic environments. Although the delivered levels are inadequate for the towns, the major deficiencies occur in rural areas among the nomads.

Low nutrition levels are attributable to low per capita income; dietary practices that restrict intake of eggs and fish; the drought at the time data were collected; and high seasonal reliance by nomads on milk. The data suggest the need for a major effort to improve the health and nutrition of the rural population and to ensure that development activities such as irrigation do not create additional health hazards for a vulnerable population. Figure 8 shows the availability of health facilities for the Somali population in 1976 (See also Table 19).

The Somali Government has since built up an extensive network of health services to the rural areas, but professional staff shortages have been a handicap. It is often difficult to fill vacant posts, even in Mogadishu. Funds allocated to health in the 1974/78 plan was only 2 percent of total plan investment, and only about half of the projects were implemented. Between 1973 and 1978 the number of dispensaries rose from 128 to 209 while the number of hospitals increased from 50 to 66 (Table 14). Little progress has been made on the effective delivery of health services to nomads. In the 1979-81 Development Plan, priority is given to communicable diseases, particularly diarrhea, tuberculosis, venereal disease, cholera and leprosy. Levels of environmental sanitation are to be improved, while programs directed at the health of mothers and children are expected to reduce the level of infant mortality. The expansion of training institutions was expected to cost So.Sh 2,150 thousand.

FIGURE 8



SOURCE: The data for this map were compiled from 1975 census data and Ministry of Health statistics (1976).

TABLE 14
HEALTH SERVICE CAPACITY

	Numbers		Numbers of Population Per Service Unit
	<u>1973</u>	<u>1978</u>	<u>1978</u>
Doctors - Somali	37	118	19,400
- Non-Somali	69	80	
Medical Assistants	408	753	5,100
Dispensaries	128	209	18,400
Hospitals	50	66	58,300
Hospital Beds	5,378	5,956	650

SOURCE: Somalia, Government of 1979a.

3.12 EDUCATION AND TRAINING

Issue: A number of major advances have been made in education and training in Somalia over the last ten to fifteen years. The literacy campaign has made a dramatic difference; the creation of a written format for the language is also important. However, there remains a great need for more general and practical education as well as for technical managerial training.

In the 1960s, Somalia had one of the lowest literacy levels in the world. The Somali language, though extraordinarily rich in poetry, oral history, and tradition, had no written form. There were only few university graduates. Great strides have since been made, and the still relatively unsatisfactory educational situation must be evaluated in light of these improvements.

The first important gain is in literacy. The introduction and adoption of the Somali script in 1972 and the use of the Roman alphabet throughout the nation has helped spread the already considerable amount of literature in Somalia. There was a strong emphasis on expansion of schooling and literacy training during the 1970s. The advances made are illustrated in Table 15.

TABLE 15
IMPROVEMENTS IN EDUCATION IN THE 1970s

	1970	1977
Percentage enrollment of eligible primary school children	6%	46%
Number of primary school children	49,000	230,000
Number of classrooms	1,427	5,640
Number of teachers	1,876	7,528

N.B. Illiteracy reduced from 90 percent in 1969 to 50 percent in 1975.

SOURCE: Black 1979

The remarkable advance in adult literacy, 60 percent in 1977, resulted from a concerted campaign in 1974/75 when all schools were closed and teachers and students teamed in a massive national attack on illiteracy (World Bank 1982). In 1975, 854,000 Somalis, nearly half the adult population, had become sufficiently versed in their language to earn certification of literacy (World Bank 1981b, 221). Although many of these gains have remained, inadequate follow-up and lack of reading materials seem to have lessened the training dividends. Also, the campaign did not reach the nomadic population (who constitute the majority) as effectively as others, resulting in substantially lower levels of nomad literacy.

School enrollments (including in the Koranic system) over the past years increased dramatically (see Tables 16-18). Primary school enrollments in particular increased at unprecedented rates. In 1975 when universal primary education was introduced intake was exceptionally high. Primary school intake reached a peak in the 1975/76 school year but the numbers have since fallen. Despite the impressive gains, a number of problems remain. Key among these are the high drop-out rate, regional imbalances and the impact of the refugees.

TABLE 16

PRIMARY SCHOOL ENROLLMENTS - GRADE I AND ALL GRADES 1969/70-1976/77 AND
PERCENT INCREASE OF TOTAL ENROLLMENTS OVER PREVIOUS PERIOD

<u>Year</u> ¹	<u>1969/70</u>	<u>1970/71</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1975/76</u>	<u>1976/77</u> ²
Grade I	7,052	10,140	13,899	21,022	24,339	133,605	80,000
All Grades	45,609	50,384	59,846	78,133	96,903	219,517	279,140
% increase over pre- vious year	-	10.5	18.8	30.6	24.0	126.5	27.2

¹During the 1974-75 school year, schools were closed because of the Rural Development Campaign in which both teachers and upper grade students were actively involved.

²Estimated by Ministry of Education, July 1976.

SOURCE: International Labour Office 1977, 344.

TABLE 17
DEVELOPMENT OF PRIMARY EDUCATION 1973-1978

	<u>1973/1974</u>	<u>1975/1976</u>	<u>1977/1978</u>
Number of Schools	592	844	1,084
Classes	2,543	5,150	5,952
Intake	23,300	133,600	68,200
Enrollment	95,900	219,500	228,500*
Teachers	2,840	4,280	8,300

SOURCE: Somalia, Government of 1979a, 203.

TABLE 18
DEVELOPMENT OF SECONDARY EDUCATION 1973-1978

	<u>1973/1974</u>	<u>1975/1976</u>	<u>1977/1978</u>
Number of Schools	28	25	31
Classes	222	145	185
Intake	1,950	1,270	2,300*
Enrollment	7,750	4,800	6,980
Teachers	437	361	523

SOURCE: Somalia, Government of 1979a, 204.

There is a high drop-out rate amongst pupils particularly for primary education. Although schooling became compulsory in 1975, between 1975/76 and 1977/79 the drop-out rate from first to second grade was 35 percent. This suggests that many groups attach a high opportunity cost to education and prefer

*These figures refer to sectoral activities. They are not necessarily in accordance with the responsibilities of the Ministry.

that their children return to or join the rural workforce after very modest schooling. Many more however continue to sacrifice the value of their children's labor (and for nomads, pay for boarding fees as well) so that the children can remain at school. It appears that the school drop-out rate is higher among agriculturalists than among nomads.

The second problem relates to regional inequalities of educational facilities and participation. For example in 1974, half the total primary school enrollment was in three towns, Mogadishu, Hargeisa and Kimayo. Similarly, Mogadishu alone accounted for 65 percent of secondary school enrollment (International Labour Office 1977). Apart from this, there are still wide differences between male and female enrollments (Table 19). The Government is directing considerable effort toward reducing these imbalances.

The refugee population also affects the educational system, especially primary education. The Government of Somalia continues to organize schooling for the refugees and their children, yet they are not considered permanent residents. Such a major provision has obvious effects on the national program.

Secondary education was temporarily affected in 1973 to 1975 by the literacy campaign and the universal primary education because students as well as teachers had to serve as literacy teachers. With the rapid rate of population growth however, secondary school enrollments will soon reach and overtake the previous levels (Table 18).

Although great strides are being made in children's education (Table 19) and at the university in Mogadishu where numbers of faculties and students are growing rapidly, the greatest problems still lie in the areas of training and management for middle level jobs. Data are incomplete for most sectors but it is clear that the provision of adequate training for middle level personnel is still below national needs, particularly in fishing, agricultural research, and marketing services. This shortage is partly a result of the still modest educational base on which training courses would be based, but it is also a result of the migration of people with these skills to the Gulf States. A major educational effort in short term training needs to be combined with appropriate salary and inducement packages to reduce the loss of these key personnel. In the meantime, the task of improving the quality and depth of the

educational system from primary through technical and on to university levels is an important one to which the Somali government seems resolutely committed.

TABLE 19
INDICATORS OF SOCIAL WELFARE

HEALTH	<u>YEAR</u>	
Population per physician	1977	18,480
Access to safe water	1975	33 percent of population
Daily per capita calorie supply	1977	88 percent of requirement
Government expenditure on education (1975 dollars)	1978	US \$5.00 per capita
<u>EDUCATION</u>		
Primary school		
Total enrollments	1979	50 percent of age group
Males	1979	64 percent of age group
Females	1979	36 percent of age group
Secondary school		
Total enrollments	1979	7 percent of age group
Higher education		
Total enrollments	1978	4 percent of age group 20-24
Adult literacy	1977	60 percent of population
Government expenditure on health	1978	US \$2.80 per capita

SOURCE: World Bank 1982.

3.13 EMPLOYMENT AND LABOR SUPPLY

Issue: Skilled and unskilled labor is scarce in Somalia's modern sector. Shortages exist in a wide diversity of activities, ranging from cane cutting and banana plantation work to government service. Yet there are possible problems in the near future of providing employment opportunities for all.

Many low cost and short term training/employment programs have been established, in an attempt to alleviate the trained labor shortage and are generally well subscribed to. The formal education sector is also providing increasing numbers of professionals, including doctors, managers, economists, and agriculturalists. Those who have received formal education are guaranteed employment upon graduation, and promotion is often rapid. Because of previously low social service levels and expanding efforts in several development sectors, more people are needed than are being trained.

Expansion of the education system has necessitated hiring large numbers of trained personnel, either as teachers or trainers of teachers. Even so, many more teachers are needed to meet the needs of planned expansion. Also, additional services to refugees have created unanticipated needs. Professionals in education, health, and rural administration are in especially short supply because of the one million refugees to whom the Somali government provides services.

In addition to these labor deficiencies, an estimated 150,000 Somalis are working in the oil producing Gulf States. The overseas workers do provide a major return flow of foreign exchange. On a conservative estimate of 20 percent repatriated wages, the value is about three-quarters of the total wages in Somalia. In fact, it is suggested that the earnings of the overseas Somalis is as much as four times the income generated in Somalia's own working sector (Jamal 1983). Meanwhile, the emigration of skilled workers, seriously inhibits the efficient operation of development and social projects, although the disruption may be hard to measure. Undoubtedly, Somalia's wages and working conditions discourage work in the modern sector. Although there have been some

wage increases the Government of Somalia cannot match the wages paid in the Gulf states.

Labor problems are not confined to the skilled ranks. The expansion of irrigation in large estates and in settlement schemes presume that a significant labor force will be readily available to take up newly created jobs. However, work conditions such as low wages, housing shortages, and health problems such as schistosomiasis and malaria discourage potential laborers. Plantations in which job availability is seasonal and irregular also face shortages of unskilled labor. Clearly, both the skilled and unskilled labor situation present serious problems to Somalia's development strategy.

Fifty-four percent of Somalia's population were in the workforce (15-64 years) in 1980. As the country's population grows there will be a proportionate increase in the labor force. The average annual growth of the labor force was 2.3 percent in the 1970s compared to 1.7 percent in the 1960s. In the 1980s the labor force is expected to increase at a rate of 2.4 percent annually. The problem of absorbing the labor force into the country's economy will be of increasing importance in the decade ahead. (See Table 20 for an estimate of available manpower from 1976 to 1980.) Labor assessment and planning has been recognized by the government as a main task. It is important that development projects and activities be looked at closely in the light of personnel needs; without such an analysis many otherwise worthwhile activities may fail.

TABLE 20
ESTIMATED SUPPLY OF EDUCATED MANPOWER¹

<u>Level of education (graduates)</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>
Primary School	8,450	1,400	2,200	3,160	6,810
Secondary School	840	1,160	410	1,500	1,400
Post-primary Technical and Vocational Training	545	630	650	830	770
Post-secondary Technical	-	-	-	100	100
University	285	386	497	600	600
Returning from abroad after studies	<u>86</u>	<u>103</u>	<u>61</u>	<u>100</u>	<u>100</u>
TOTAL	10,206	3,679	3,818	6,290	9,980

¹Excluding inputs in next higher institution.

SOURCE: International Labour Office 1977, 21.

3.14 INSTITUTIONAL STYLE AND DEVELOPMENT STRATEGY

Issue: The Government of Somalia has shown considerable strength of purpose and capability in executing several major tasks. The literacy campaign and the handling of the drought and refugee situations are prime examples. However, the public sector has not been able to sustain a viable economy. Part of the reason is due to the institutional set-up, particularly rigid differentiation of ministerial function and lack of coordination between Government institutions and the various assistance donors.

The public sector is characterized by a centralized system consisting of several ministries and over fifty parastatals. While such a system is advantageous in maximizing scarce manpower resources it has proved to be problematic in the context of the development strategy and needs outlined in the preceding sections. Government's philosophy of development as well as development policies particularly in the seventies emphasized major government intervention in various enterprises and responsibilities. Key among these are irrigation expansion in the south, using irrigation as a means of settling former nomads, development of a national road system, provision of social services, and some limited industrial development in large cities. Drought and refugee problems added a new dimension to development programs as demonstrated by these factors:

- the appreciation of a need to intervene more directly in support of the nomadic populations--in provision of health, education and other services as well as in range management and water supply;
- a concern for rural development programs in general, including the non-irrigation farming sector;
- an appreciation that settlement irrigation projects are capital intensive and may not be a replicable technique of settling nomads over a long period;
- the influx of 1.5 million refugees which burdens national resources.

In general it is recognized that national needs, especially rural development must be addressed. Recent policy trends call for an integrated and wider

areal focus for development than hitherto. To be effective, many of these development programs will need a close integration of activities that are currently the responsibility of different ministries. For example, a program involving nomads may include water provision through boreholes, range management, provision of health and/or education centers, and new marketing structure, with as many as five ministries involved. The need for greater inter-ministerial cooperation and coordination cannot be overemphasised.

Another dimension to Somali's development problems which is related to the capacity of the public sector is the weakness of the country's decision-making institutions. As noted in the previous section, there is an acute shortage of trained personnel especially university-trained staff. Coupled with inadequate basic information, ministries and agencies responsible for economic planning, financial decision-making and public administration are not always able to direct government resources and spendings into productive use. Since many development efforts and goals during the 1970s depended on an able intervention by Government, these shortcomings (in combination with factors outlined in Chapter 1) resulted in relatively slow growth during this period. To curb the tendency towards a stagnation of the productive sectors government continues to encourage private investors to participate in small scale manufacturing, retail trade, and in general crop and livestock production.

However the Government of Somalia plays the dominant role in the management of large scale production schemes particularly in agriculture, mining, industries and fisheries. The 1979-81 development program emphasized this stand. Similarly, the 1982-86 five year plan focuses on agriculture in the south and fishing and mineral exploitation in the north. Increasingly, in response to constraints in its public sector, the government encourages joint ventures with multilateral organizations to help overcome some of the major development bottlenecks--for example, skilled manpower, managerial expertise and financial aid.

Somalia receives substantial investment resources from foreign donors (Appendix I) and continues to welcome foreign private enterprises on mutually advantageous terms. With its balance of payments problem and potential burden of debt repayments it is essential that development projects that are implemented be not only viable but contribute towards improving the country's

balance of payments. While most donors have offered financial assistance with minimal costs and interest rates, much wasteful investment can be avoided if there is greater cooperation, coordination and communication between donor agencies and public institutions in the screening, assessment and feasibility studies of development projects.

CHAPTER 4. THE NATURE AND DISTRIBUTION OF POVERTY IN SOMALIA

4.1 INTRODUCTION

In this section, we attempt to define and analyse the distribution and nature of poverty in Somalia. Such a task is difficult enough in most countries but it is especially so in Somalia for several reasons. There is little reliable, regionally disaggregate data on which analysis can be based. It was largely conceived that poverty was uniformly spread over large areas of Somalia but this generalization has been reexamined in more recent years. The complicated events of the past ten years (drought, famine, war and refugee influx) have modified former patterns of the incidence and distribution of poverty. Production estimates in the largely subsistence economy are difficult to assess.

4.2 SOMALIA IN AN EAST AFRICAN CONTEXT

By conventional world standards, Somalia is a very poor country. Its relative position with other East African countries can be judged by looking at the data in Table 21.

Even with the increase in population caused by the refugee influx, Somalia remains the least populated eastern African country (3.8 million). It is even less populated than small countries such as Rwanda and Burundi (Column 1). Somalia is sparsely populated for such a large land area (638,000 sq. km), although its arid nature makes the thin settlement understandable. Its small population relative to land size means that Somalia expends proportionately more on transport and infrastructure, which influences the poverty of the country.

Somalia's estimated per capita GNP (Column 2) is one of the lowest not only in East Africa but the whole of Africa. The country is classified by the United Nations as one of the thirty-one least developed countries. The growth rate of per capita GNP (Column 3) is not only negative but the lowest of all the countries. In the mid-seventies, the drought and war burdens were responsible for the slow and negative growth rate.

The Physical Quality of Life Index is a measure which attempts to assess aspects of life neglected by GNP statistics, for example access to basic needs

such as health, water and education. The figure used here is an average of life expectancy at age one, infant mortality and literacy. Prior to the literacy campaign in Somalia the PQLI was much below most African countries except the Sahelian countries. Because of the significant improvements in literacy the figure has risen and compares favorably with other east African countries (Column 4).

The demographic and fertility-related indicators shown in Columns 5 to 8, show fairly uniform birth rates (ranging between 45 and 53 per thousand). Death rates fall into three groups: 13-15 per thousand (Kenya, Uganda and Tanzania), 19-22 per thousand (Sudan, Rwanda, Somalia and Burundi), and 24 per thousand (Ethiopia). Although Somalia falls in the middle range for death rates, its infant mortality rate is still very high. Nonetheless infant mortality reduced from 177 per 1000 live births in 1975 to 146 in 1980; while life expectancy increased from 41 years in 1975 to 44 years by 1980.

By 1980, literacy levels in Somalia had reached 60 percent but the extent to which this level can be sustained and improved are uncertain (see Section 3:12). Levels of government expenditure on public education in Somalia is low. Compared to countries like Kenya and Uganda however, the greater importance given to education in Somalia is more obvious when increases in expenditure over time for the other countries are considered. Somalia increased its educational spendings more than Rwanda, Ethiopia and Burundi which had similar levels of educational expenditure as Somalia in 1974.

Defense expenditure per capita in Somalia was the highest among all the East African countries (Column 11). Increased spending on the military continued in Somalia throughout the seventies, reflecting the continuing hostilities with Ethiopia. Per capita outlay for military matters was much higher than for education (Column 10).

Exports and imports of merchandise trade (Column 12) illustrate the general pattern of greater values of imports into East African countries than exports. Somalia has a low ratio of exports to imports when compared with many other East African countries for example, Sudan, Tanzania, Kenya, or Burundi, but this is partially because rising costs of imported oil does not affect Somalia as adversely as other African countries since its development level and energy needs are relatively lower.

TABLE 21

EAST AFRICAN COUNTRY COMPARISONS

	1	2	3	4	5	6	7	8
	Population 1 Mid 1981 (millions)	Per Capita GNP 1980 (\$)	Per Capita growth rate 1960-80 (%)	PQLI	Birth rate 1980 (per 1000)	Death rate 1980 (per 1000)	Life expect- ancy at birth 1980 (years)	Infant mor- tality 1980 (per 1000 live births)
Ethiopia	33.5	140	1.4	20	49	24	40	146
Kenya	16.5	420	2.7	53	51	13	55	87
SOMALIA	3.8	140a	-0.8a	39	46	20	44	146
Sudan	19.6	410	-0.2	32	47	19	46	124
Tanzania	19.2	280	1.9	53	46	15	52	103
Uganda	14.1	300	-0.7	45	45	14	54	97
Burundi	4.2	200	2.5	33	46	22	42	122
Rwanda	5.3	200	1.5	35	53	20	45	137
	9	10	11	12		13		
	Adult Literacy (%)	Education Expenditure per capita 1979 (\$)	Defense Expenditure per capita 1979 (\$)	T R A D E		International Reserves 1980 (\$ million)		
				Exports 1980 (\$ million)	Imports 1980 (\$ million)			
Ethiopia	15	3b	5b	350	537		263	
Kenya	50	13	13	1299	2305		539	
SOMALIA	60	5	16	141	240		27	
Sudan	20	4	10	543	1616		48	
Tanzania	66	7	15	508	1258		20	
Uganda	48	11b	11b	450	340		17	
Burundi	23	4b	5b	65	168		105	
Rwanda	50	3	2	140	220		186	

SOURCE: World Bank 1982; Overseas Development Council 1982.

a: figures

b: 1978 values

In summary, Somalia is a poor country in a world, African and regional context. The ethnic and linguistic homogeneity of Somalia, and the mastered skills of survival in a harsh environment, though, are potential advantages and cultural strengths for national development. Ironically, the pressures of the last decade have undermined traditional methods of managing scarce resources to maximum advantage, as well as family and clan cohesiveness. For Somalia, endowed with modest resources at best, these stress dimensions have hindered development investment and added more to the poverty of the last decade.

4.3 POVERTY IN SOMALIA

The Family as a Unit of Analysis

Even though there is some resource sharing among lineage and clan groups, the basic organizational unit in Somalia continues to be the nuclear and extended family. The family constitutes the nation's most basic resource owning and using group. In Somalia, family strategies and cohesiveness are vital considerations in an analysis of poverty since family resources (both human and physical) are spread out in different roles and occupations as well as locations. All members contribute to the family's well being; camel herding, sheep and goat grazing and cattle rearing are carried out simultaneously by different members of the family while other members are urban dwellers, working in government service, or working overseas. The fact that it is difficult to gather statistics on these diverse and "private" economic ventures explain to some extent why empirical studies of poverty in Somalia are very few.

Classification of Social/Economic Groups

Socioeconomic groups in Somalia are divided into nomads, settled rainfed agriculturalists, irrigation farmers, fishermen, urban residents--unemployed or employed in the public or private sector, and overseas workers. In 1980, 82 percent of the labor force was in agriculture or livestock (World Bank 1982). Out of these, about 60 percent were nomads. Settled rainfed agriculturalists, irrigators and fishermen constitute about 19 to 22 percent of the remaining rural population. This division is a valid approach to a breakdown of the national economy.

Differentiation of wealth and poverty among social groups and regional areas

Most dryland farming (84 percent) takes place in the south of the country with very little in the central zone and only about 15 percent in the north. Nomadism is the main activity in the north and much of the central parts of Somalia. Irrigated agriculture is mostly concentrated along the major rivers in the central and southern areas. There are wealth differences not only among social groups but also on a regional basis. Using the few studies available one may attempt an analysis of wealth differences between groups and regions.

Previous studies of income distribution in Somalia have used different approaches to define poverty. Out of the three major studies, two studies used household expenditures and one used livestock and acreage under cultivation. The basic source of information on income distribution in Somalia is the Middle Shebelle survey (International Labour Office 1977) among nomadic, rural and urban households. Based on its findings the ILO 1976 mission to Somalia classified Somali households. The conclusions indicate a highly skewed income distribution particularly for the rural areas (see below). It should be emphasized that the findings are not representative of the country's situation since other regions are more dependent on subsistence production which represents their source of livelihood.

Table 22 shows one of the earliest data collected on socioeconomic classes in Somalia. This fragmentary data from a pilot household sample survey in 1975 shows that there is a wide distribution of expenditure within nomads, settled agriculturalists, and urban dwellers. Even using a distorted exchange rate of US \$1 = So.Sh 6.3, the largest category (5,200 So.Sh) represents a household expenditure of only \$825, or about \$165 per capita per year. Real values are about half this. Of the 404 households surveyed, only 94 spent above 5200 So.Sh, including just over 20 percent in rural areas and 40 percent in urban areas. The rest may be categorized as poor though each economic group showed wide differentiation in expenditure. Forty-five percent of settled agriculturalists and 26 percent of nomads spent less than So.Sh 1000 per household per year.

The data suggest:

1. lower cash expenditure (and living standards) among settled farmers than nomads;

TABLE 22
1975 HOUSEHOLD EXPENDITURE SURVEY

Size Class (in So.Shs. per annum)	NOMADIC SECTOR		RURAL SECTOR ¹		URBAN SECTOR	
	Number of Households	%	Number of Households	%	Number of Households	%
0- 520	44	17.7	36	34.6	1	1.9
520-1,040	20	8.1	11	10.6	2	3.8
1,560-2,080	25	10.1	5	4.8	7	13.8
2,080-2,600	19	7.7	7	6.7	4	7.7
2,600-3,120	16	6.5	2	1.9	3	5.8
3,120-3,640	17	6.8	3	2.9	3	5.8
3,640-4,160	8	3.2	1	0.9	3	5.8
4,160-4,680	9	3.6	6	5.8	5	9.6
4,680-5,200	6	2.4	3	2.9	1	1.9
over 5,260	52	21.0	21	20.3	21	40.4
TOTAL	248	100.0	104	100.0	52	100.0

^{1/} Households in rural villages in Middle Shebelle are mainly agricultural.

SOURCE: International Labour Office 1977, 331

- ii. greater polarization of income among settled farmers than nomads;
- iii. low living standards for half the urban households;
- iv. the existence of a large, poor group of settled livelihoods and a smaller one of nomads.

This set of conclusions is reinforced by the data set out in Table 23. The distribution of animal wealth shown is tentatively based on pilot surveys, but it confirms the pattern of wealth distribution for widely separated parts of the country as it relates to livestock holding.

Camels have traditionally been the source of wealth and status among all Somalis, especially among nomads. Yet 35 percent of the sample in northern Somalia owned no camels and less than 50 percent of the sample had more than five camels. In the Afmadow sample, 57 percent had no camels, and 73 percent owned less than 5; in Bardere the comparable figures are 55 percent and 69 percent. Cattle data suggest that economic differences are not made up by cattle holdings. In the north, 92 percent owned no cattle, though in Afmadow and Bardere, this percentage falls to 22 and 27 respectively.

The table emphasizes sheep and goats as a source of wealth and income for most nomads, particularly in the north. Sixty-nine percent of the sample had more than fifty sheep and goats, suggesting that a herd of about sixty of these animals is necessary to lift the household above the absolute poverty line. This does not apply in the south where ownership of sheep and goats is not so prevalent or as indicative of status. The rural sector seems bound together by poverty and a relatively uniform life style that contains within it a wide range of wealth and income.

TABLE 23

DISTRIBUTION OF HOUSEHOLDS ACCORDING TO SIZE OF HOLDINGS
OF DIFFERENT SPECIES (3 PILOT SURVEY AREAS 1973 and 1974)

Animal Species and size of holding	HOUSEHOLD					
	Northern Somalia		Juba Area-Southern Somalia			
	Burao		Afmadow		Bardere	
	Number	%	Number	%	Number	%
<u>Camels</u>						
0	1,637	35.5	586	57.5	470	55.0
1-5	856	18.6	158	15.5	119	14.0
6-10	818	17.8	60	5.9	48	6.0
11-20	480	10.4	91	8.9	59	7.0
21-50	519	11.3	90	8.8	124	15.0
51+	294	6.4	34	3.4	27	3.0
Sub-total	4,604	100.0	1,019	100.0	847	100.0
<u>Cattle</u>						
0	4,217	91.6	200	21.5	229	27.0
1-5	156	3.4	36	3.9	94	11.0
6-10	127	2.7	88	9.5	158	18.0
11-20	104	2.3	104	11.2	142	17.0
21-50	-	-	332	35.7	166	20.0
51+	-	-	169	18.2	58	7.0
Sub-total	4,604	100.0	929	100.0	847	100.0
<u>Sheep & Goats</u>						
0	280	6.1	885	86.8	800	94.5
1-5	343	7.5	27	2.6	5	0.6
6-10	172	3.7	21	2.1	8	1.0
11-20	107	2.3	23	2.3	14	1.6
21-50	545	11.8	38	3.9	6	0.7
51+	3,157	68.6	23	2.3	14	1.6
Sub-total	4,604	100.0	1,019	100.0	847	100.0

SOURCE: International Labour Office 1977, 271

4.4 THE IFAD CLASSIFICATION OF RURAL POVERTY IN SOMALIA

The 1979 study by the International Fund for Agricultural Development (IFAD) mission sets out perhaps the most detailed and up-to-date analysis of poverty in Somalia. Poverty is defined on the basis of livestock and land and the income which these will provide. Since sales and domestic consumption are not included, the figures are simply "best estimates" of livestock wealth. Income from land is used for cultivated areas. The study distinguishes three main patterns of poverty: sporadic, endemic, and disguised (Table 24).

Sporadic poverty occurs most frequently as a result of drought, locusts, and labor displacement. The impact of these events is differential and, for most, the duration is limited. However, the effect on people may be more long term than expected as levels of health nutrition and household or clan resources reduce proportionately.

The IFAD team judged that the nomadic peoples are the most heavily affected by sporadic poverty. The potential impact area extends to all parts of the country and in recent times has included northern, central, and southern areas. Camels are the one resource which tend to survive these events; cattle, sheep and goats all suffer significant losses.

Endemic poverty is widespread in Somalia and is reflected in the data presented in this chapter. While sporadic events help to lower the resilience of the resource base of some farmers and herders, the basic cause of endemic poverty seems to be much more a reflection of the low productivity of a very modest resource base under current modes of production. Where the resource base is greater, as in the fishing industry or in areas feasible for irrigation, current levels of technology and marketing do not permit Somalia to take full advantage of these potentials. As indicated earlier in this section, all rural livelihood systems include some people affected by endemic poverty. The IFAD group identified: small holders on irrigated farms, displaced banana plantation workers, small holders in rainfed areas, small scale fishermen, and small herdsmen in the northeast as those most affected.

Disguised poverty is the third IFAD category, though the term "disguised" may not be appropriate term for all of this category. War, the continuing

TABLE 24
SCHEMATIC PRESENTATION OF RURAL POVERTY IN SOMALIA

SPORADIC	ENDEMIC	DISGUISED
<u>Cause:</u>		
Random variables drought locust calamities labor displacement	Low productivity Poor resource base	War Previous droughts Unprepared settlements
<u>Condition:</u>		
Occasional poverty Severe incidence on assets, nutrition health, etc.	Low incomes poor nutrition health, etc.	Sustained or relief assist- ance and food rations
<u>Groups Affected:</u>		
Nomads Livestock (sheep, goats, cattle)	1. Smallholders in irrigated farms 2. Displaced banana workers 3. Smallholders in rainfall areas 4. Small fishermen 5. Small herdsmen in N.E.	1. Settlement groups, farming, fishing 2. War refugees

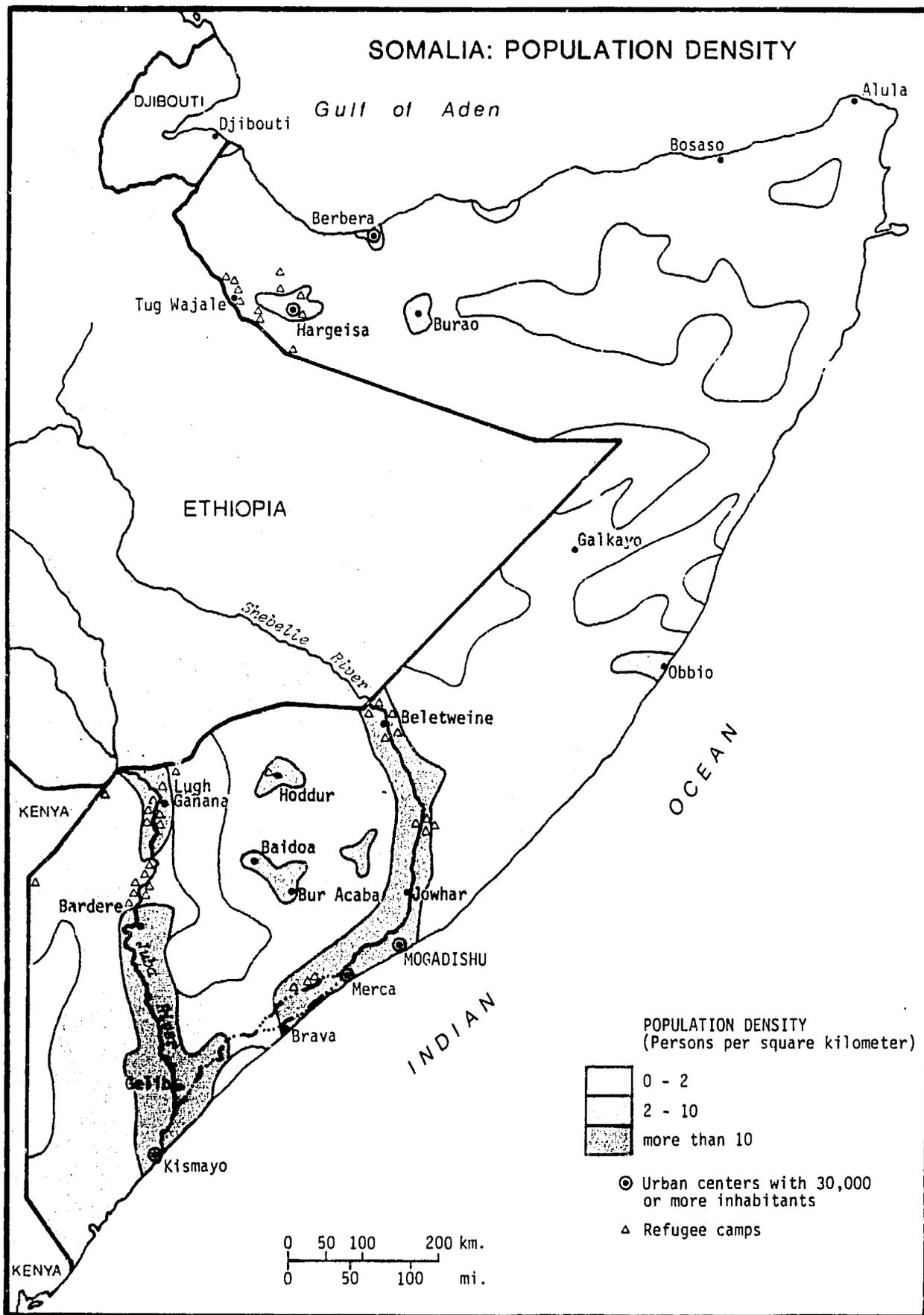
SOURCE: International Fund for Agricultural Development 1979.

impact of previous droughts, and inadequately planned settlement projects are three such situations which give rise to "disguised poverty." Disguised poverty brought about by a combination of war and drought is the most pressing in Somalia today. The impact of the necessary food aid programs also constitutes an important factor in current Somalia development efforts. Disguised poverty of this type affects perhaps between 30 and 40 percent of the total number of people within the Somali frontiers. The smaller group suffering from settlement and planning rehabilitation disturbances after the 1970's droughts include people in fishing camps and those who have had to be transferred from the unsuitable planning irrigation program in Dujuma.

4.5 REGIONAL DISTRIBUTION OF POVERTY IN SOMALIA

Tables 25 to 28 give a summary of the livestock and agricultural sectors in Somalia. Basic indicators of the livelihood system, which are relevant to poverty status and the survival ability of different groups of the population are given. For easier analysis, regions are grouped into north or south and the two main groups discussed are nomads and settled farmers.

Figure 9 and Columns 1 to 4 of Table 25 show a significant range of population totals and occupations between the regions. In the north, W. Galbeed and Togdheer have comparatively large total and nomad populations, with W. Galbeed occupied by the most settled northern agriculturalists. Nugal is sparsely populated; Bori and Saraag are large regions with a mostly nomadic population. Note that there are high proportions of nomadic families both in the north and in the south. Jamal (1983) estimates that 71 percent of the population in the south is nomadic and 79 percent in the north; but the south has the majority of the settled farmers. Over 60 percent of settled agriculturalists are in the south. Only Bay region shows a predominance of settled farmers; lower Shebelle has about equal numbers of nomads and settled farmers. Central Somalia is sparsely populated with nomads. Table 26 shows the regional distribution of animals and proportions of nomadic families, while Table 27 shows other indicators of livestock wealth and consumption in Northern and Southern Somalia.



Note: It has been variously estimated that as high as 70 percent of the people of Somalia are nomads. This factor must be considered when viewing any portrayal of population density.

SOURCE: Central Intelligence Agency 1977.

TABLE 25

LIVESTOCK AND AGRICULTURAL INDICATORS BY REGION

REGION	1	2	3	4	5		7		9
	Total Population (000)	Nomadic Population (000)	Settled Rural Population (000)	Non-agricultural Population (000)	Number of Families (000)		Livestock wealth per family (So.Sh)		Cultivated area per farm family (ha)
					Nomadic	Farmers	Nomadic	Farmers	
NORTH					216.9	55.7	28207	9402	
Mudug (Central)	215	170	32	13	35.0	5.9	43419	14473	0.8
Bari (Northeast)	154	116	27	11	23.9	5.1	35769	11923	0.2
Galguduud (Central)	182	119	44	19	24.5	8.2	34194	11398	0.6
Sanag (Northeast)	145	113	22	10	23.2	4.1	26957	8986	0.9
Waqooyi Galbeed (NW)	440	271	118	51	55.8	21.9	25401	8467	2.0
Nugal (Northeast)	87	66	15	6	13.5	2.7	20690	6897	0.8
Togdheer (Northwest)	258	198	42	18	40.7	7.8	14870	4957	1.2
SOUTH					233.0	95.2	19978	6659	
Gedo (Juba River)	212	181	22	9	37.2	4.1	31969	10656	4.2
Hiraan (Shebelle River)	147	116	22	9	23.9	4.1	30912	10304	7.1
Bay (Interriverine)	302	100	141	61	20.6	26.3	17350	5783	3.9
Bakool (Interriverine)	100	79	15	6	16.2	2.7	16679	5560	4.7
Middle Shebelle (Shebelle)	263	166	68	29	34.2	12.7	17668	5889	2.7
Juba (Juba River)	439	296	100	43	61.0	18.7	15387	5129	4.3
Lower Shebelle (Shebelle)	298	193	143	62	39.8	26.6	12419	4140	5.7
TOTAL	3,722	2,184	811	727	450.0	151.0	23,851	7,950	3.3

Columns 1 to 4: 1975 figures.

Columns 5 to 9: 1977 figures.

SOURCE: Somalia, Government of 1979a and Jamal V 1983.

TABLE 26

LIVESTOCK POPULATION, LIVESTOCK UNITS AND NOMADIC FAMILIES, 1977

Region	Cattle ¹	Sheep and goats ¹	Camels ¹	<u>Livestock Units</u>		Nomadic families ('0000)	Ratio of nomadic to farm families
				No. ¹	Per nomadic family		
North	364	17,147	1,674	4,600	26.9	157.4	3.8
Central	700	8,198	1,257	3,296	51.3	59.5	4.2
South	3,891	7,363	3,024	8,591	32.4	233.0	2.4
Total	4,954	32,708	5,956	16,488	33.0	450.0	3.0

¹Thousand head.

Notes 1: Total population taken as 4.77 million, 56.6 percent nomads.

2: Family size assumed to be six members.

3: Livestock units are in terms of cattle equivalents, with cattle = 1, sheep and goats = 0.125, and camels = 1.25.

SOURCE: Jamal 1983, 285.

Livestock wealth is an important measure of total household resources among both nomads and settled agriculturalists. Amongst nomadic families, Mudug, an apparently poor region of central Somalia, ranks highest (So.Sh 43,419); its neighboring region, Galguduud also ranks high as well as Bari, Gedo and Hiraan. W. Galbeed, Sanag and Nugal form a middle range, while the other regions show much lower levels.

TABLE 27

LIVESTOCK PRODUCTION AND INCOME IN NORTHERN AND SOUTHERN SOMALIA, 1977

Item	Total (millions)			Per family (units)			Per family per day (units)			Equivalent calories per family per day		
	Total	North	South	Total	North	South	Total	North	South	Total	North	South
Livestock wealth (Sh)	10733	6118	4655	23851	28207	19978	-	-	-	-	-	-
Meat income (Sh)	368	102	167	818	927	717	2.24	2.54	1.96	768	870	671
Exports	204	172	32	453	793	137	-	-	-	-	-	-
Internal (including factory)	164	28	136	364	129	584	-	-	-	-	-	-
Meat consumption (kg)	54	30.8	23.4	120	142	100	0.33	0.39	0.27	660	780	540
Milk consumption (liters)	2464	1405	1069	5475	6478	4588	15.0	17.7	12.6	11625	13718	9765

- = not applicable.

SOURCE: Jamal 1983, 306

By 1983, it is estimated that about 19 percent of the total population cultivate the land as dryland farmers. These occupy the interriverine areas especially in the Bay region. Column 6 of Table 25 shows the predominance of farm families in Lower and Middle Shebelle, Bay, Juba and W. Galbeed. With the exception of W. Galbeed, all these regions are in the south. Column 9 showing the data on cultivated areas illustrate the levels of cultivation in all of Somalia and the range between regions. Table 28 shows the main agricultural areas in Somalia, with the numbers of families and hectares involved. Southern Somalia is no doubt the agricultural zone of Somalia, containing three fifths of all farm families and four fifths of agricultural land.

TABLE 28
ESTIMATED NUMBER OF AGRICULTURAL FAMILIES AND AREA
BY TYPE OF FARMING, 1977

Type of farming	Families ('000)	Area ('000 hectares)
Controlled irrigation	10+35-50 workers	50
Flood irrigation	20-30	110
Shebelle river	15-20	80
Juba river	5-10	30
Rain-fed farming	120	485
Shebelle/Juba	35	263
Bay	26	100
Waqooyi/Galbeed	22	40
Others	36	85
Total	150	645

SOURCE: Jamal 1983, 289

Incomes and Poverty in Somalia:

Based on newly available data, Jamal's study has defined the poverty line in Somalia for both nomads and farmers using a food consumption criterion. For nomads the factors used are numbers of livestock, livestock products and market sales. The poverty lines arrived at differ for northern nomads and southern

nomads (see Table 29). For farmers, the poverty line derived takes account of both their livestock as well as land assets since much of their subsistence is from the land (grains) rather than livestock.

TABLE 29
POVERTY LINE, AVERAGE HERDS, LIVESTOCK WEALTH, AND LIVESTOCK-CALORIE UNITS,
NORTHERN AND SOUTHERN SOMALIA, 1977

Area	Cattle	Sheep and goats	Camels	Wealth(Sh)	Livestock- calorie units
<u>Poverty line</u>					
South	12	22	9	16,000	42.6
North	3	72	8	19,000	52.2
National	7	48	9	17,450	47.3
<u>Average herds</u>					
South	15	28	11	19,978	53.2
North	4.5	108	12	28,207	77.3
National	10	65	12	23,851	64.7

SOURCE: Jamal 1983, 294

Column 7 in Table 25, shows livestock wealth per nomadic family. Using So.Sh 30,000 per family as a regional poverty line demonstrates the extent of poverty among nomads. In the north, poor nomads can be found in most regions except Bari and Galgudud, whereas in the south they are found in all regions except Gedo and Hiraan. Taking account of intraregional variation, estimate proportions of nomads below the poverty line are given as:

- 5 percent - Mudug, Bari, Galguduud, Gedo, Hiraan
- 15 percent - Sanag, W. Galbeed,
- 40 percent - Bay, Bakool, Middle Shebelle, Juba,
- 50 percent - Nugal
- 75 percent - Togdheer, Lower Shebelle.

Out of a total of 450,000 nomadic families in the country, 146,900 families (33 percent) live below the poverty line (Jamal, 1983, 295). The greater proportion of these are in the South.

For farmers, Columns 8 and 9 illustrate livestock and land assets. Using a 3.5 hectare and So.Sh 7,950 criterion, all the southern agricultural regions except Middle Shebelle fall above the poverty line. In the north, poverty among farmers is more obvious since only small land holdings are cultivated but because of the supplements from livestock it is only in Sanag, W. Galbeed, Nugal and Togdheer that farmers' consumption levels fall below the poverty line. Together with farmers below the poverty line in Middle Shebelle and Bay, 34 percent of all farm families in Somalia are in poverty.

4.6 SUMMARY

There are various dimensions to analyzing poverty in Somalia. Poverty resulting from natural calamities (sporadic poverty) and poverty associated with refugees (disguised poverty) are very important. The changeable nature of poverty in Somalia makes it more important to also analyze poverty in terms of the survival ability of different segments of the population. This means that poverty analyses should identify those groups which are more vulnerable to the harsh physical environment than others, as well as those groups that are more prone to hunger resulting from the lack of productive assets (endemic poverty). Food availability is more likely to be a problem in northern Somalia than in the south especially among farmers, but also among nomads who own small herds.

Using income level data, an analysis of regional conditions reveals higher average income in some nomadic dominated regions. Generally poverty in Somalia has been shown to exist in all categories of society--urban, nomadic, settled rainfed or irrigated agricultural and fishing. Somalia may simply be classified as a poor country but available data indicate a clear north-south pattern as well as a considerable range of income within each social/occupation group and region.

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APPENDIX I

SOMALIA: SUMMARY STATISTICS

DEMOGRAPHY

Population	1981	3.8 million
Annual growth rate	1970-1980	3.1%
Life expectancy	1980	44 years
Crude birth rate	1980	46 per 000 population
Crude death rate	1980	20 per 000 population
Infant mortality rate	1980	146 per 000 live births
Projected population	1990	5 million
15-64 age group	1980	54%

ECONOMY

GNP per capita	1979	140 dollars
Inflation rate	1970-80	12.4% per annum
Balance of payments	1980	-136 million (US\$)
Inflow of external capital	1980	114 million (US\$)
External public debt	1980	688 million (US\$)
International Reserves	1980	27 million (US\$)

DOMESTIC PRODUCTION

GDP	1979	1130 million (US\$)
GDP growth rate	1970-79	3.4% per annum
Agriculture	1970-79	3.0% per annum
Industry	1970-79	-2.6% per annum
Services	1970-79	6.9% per annum

SOURCE: World Bank 1982; Overseas Development Council 1982.